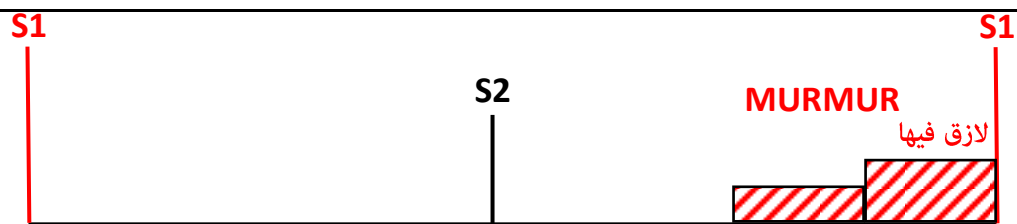
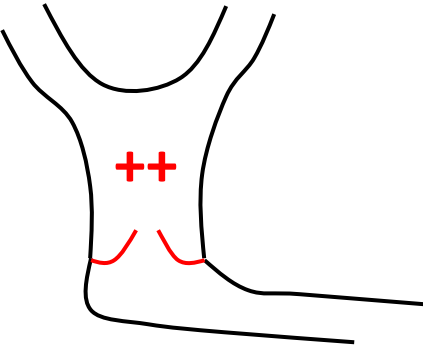
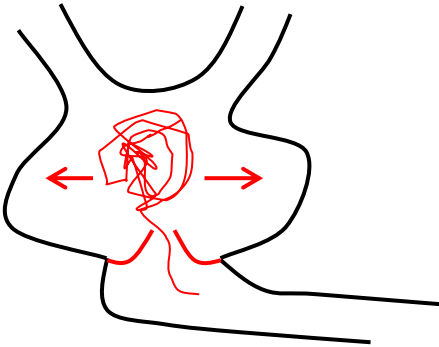
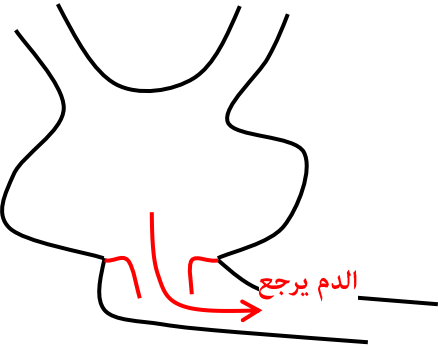
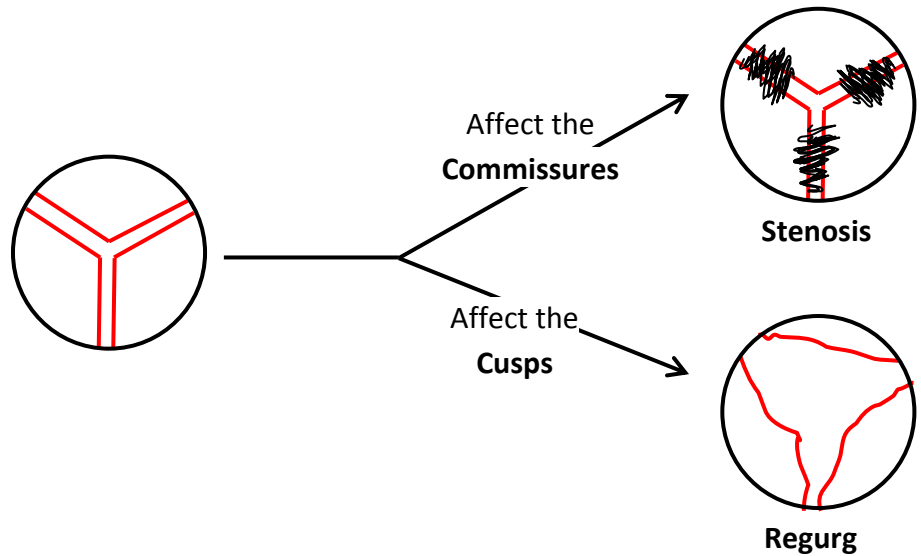
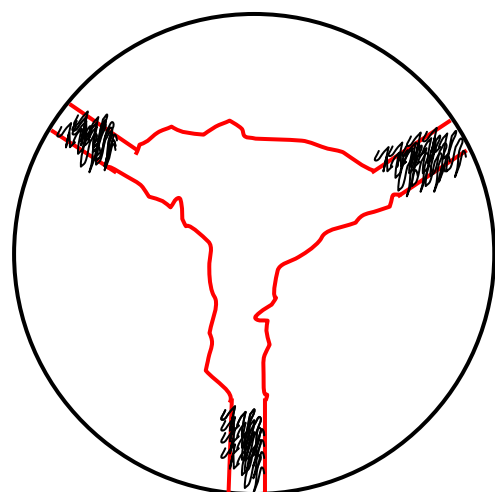


		Aortic Stenosis (A.S.)		Aortic Regurg (A.R.)			
■ Etiology :		• Congenital .. طفل • Rheumatic Fever .. متوسط العمر • Calcification .. عجوز		أسبابه كتييرة • The <b>COMMONEST</b> Cause in Egypt is Rheumatic Fever			
■ Clinical	■ H/O :	• Low COP .. up to Syncope (دوخة وزغللة)		• Palpitation (حاسس بـ رفرقة)			
		• then, <b>ANGINAL PAIN</b> .. for a Long Period * if Left Ventricular FAILURE occur → Dyspnea (كرشة نفس ونهجان) but it's <b>VERY LATE</b>					
	■ General Examination :	*here, it's Useless		★ <b>Peripheral Signs of A.R.</b> (إذا لقيتهم .. تعرف بيهم تشخيص الحالة ع طول)			
	■ Local Examination : (Inspection, Palpation & Percussion)	*here, it's Useless • Apex → Sustained Apex		• Apex → Hyper-dynamic Apex (Volume Overload) • Aortic Pulsations <b>Dancing Pericardium</b>			
		* if Left Ventricular DILATATION occur → Apex will Shifted Outward & Down					
	■ Auscultation :	• Normal Sound	S2 : ↓ Muffled (بس مش شرط)		Normal (بس ديه آراء آراء .. في كتب كاتبة حجات مختلفة)		
		• Murmur					
			★ <b>MURMUR جداً سهل</b>				
			• Time	Mid Systolic (Systolic Ejection)		MURMUR صعب جداً	
			• Character	Harsh		Early Diastole	
• Site			1 <sup>st</sup> Aortic Area		Soft Blowing Murmur (شبه صوت النفس)		
• Propagation	To Carotid & to Apex .. (طالع نازل)		2 <sup>nd</sup> Aortic Area				
• ↑↑ by	لما العيان : يميل لـ قدام .. أو يخرج نفسه		✖				
		N.B. The SEVERITY of the Disease is Detected by <u>Length of Murmur</u> & <u>Intensity of S2</u>		لما العيان : يميل لـ قدام .. أو يخرج نفسه			
• Additional Sounds		—		لما العيان : يميل لـ قدام .. أو يخرج نفسه			
■ Complication		Search for <b>A.F. &amp; Pulmonary HTN</b> in The Cases					
■ Investigations		by Scheme					
■ Treatment		by Scheme					
■ Oral Qs		• The <b>Most Common</b> Cause of A.S. in Egypt is Rheumatic Fever • The <b>Most Common</b> Cause of A.S. in the World is Congenital		• How Dose the Case could be <b>Isolated A.R. while the Etiology is Rheumatic Fever ?</b> - maybe it is <b>One of the Rare %</b> of Rh. Fever - maybe it is <b>Isolated in Auscultation</b> .. but in ECHO it's Double Leision			
		• The <b>Best Investigation</b> is ECHO & DOPPLER		• The <b>Best Investigation</b> is ECHO & DOPPLER			
		• The <b>Assessment of Severity</b> is done by Pressure Gradient (ABP) “if More than 50 Difference >> it's Severe”		• The <b>Assessment of Severity</b> is done by its Effect on the Lt. Ventricle - for Degree of Dilatation (Dimensions) & for Function (Ejection Fraction)			
		• The <b>Initial Starting Treatment for these Cases</b> is PROPHYLACTIC (Prevention of Rheumatic & IEC) “حسب الحالة فيها أيه”					
		• The <b>Treatment of Angina</b> is Sub-Lingual Nitrate (ياخد القرص وهو قاعد)		• The <b>Treatment Which Improves the Regurg</b> is Small Dose of Vaso-Dilator (Captopril)			
		• The <b>Patient Can go for Interventional Treatment with 2 Conditions must be fulfilled</b> is the Lesion is Isolated & Non-Calcified → Balloon-Aortic-Valvo-Plasty (بس نتأجه وحشة)		• The <b>Patient Can NOT go for Interventional Treatment</b>			
				• The <b>2 Infection Diseases Could Cause A.R.</b> are Syphilis & Infective Endocarditis			
				• in A.R. Cases <b>Which Joints Do You Prefer to Exam for Diagnosis ?</b> • Peripheral Joints : - Big Joints .. for Rheumatic - Small Joints .. for Rheumatoid or Marfan \$ • Axial Joints : for Ankylosing Spondylitis			

Mitral Stenosis (M.S.)				Mitral Regurg (M.R.)	
■ Introduction for M.S. :	شكوته		Stages	هـ تسمع أيه بـ سماعتك ؟!	
	Dyspnea		1- Asymptomatic	M.S. Murmur Only	
	Low COP		2- Pulm. Congestion		
	Systemic Venous Congestion (Mainly Edema)		3- Pulmonary HTN	+ P. HTN	
		4- Rt. V.F.	+ if Rt. Vent Dilate → Retract the Tricuspid Ring → T.R. Murmur (may be heard)		
■ Etiology :				أسبابه كتييرة	
• Rheumatic Fever in 99% of cases <b>This the ONLY Disease which ISOLATED LEISION in Rheumatic Fever</b>				• The <b>COMMONEST</b> Cause in Egypt is <b>Mitral Valve Prolapse</b> , 2 <sup>nd</sup> Rheumatic Fever, 3 <sup>rd</sup> Ischemia	
■ Clinical	■ H/O :		• <b>DYSPNEA</b> (كرشة نفس ونهجان) → Low COP (دوخة وزغللة) → Systemic Congestion (Edema) المريض الوحيد اللي بـ يبدأ بـ كرشة نفس محترمة .. ولازم تهتم بيها وتعمل لها Stage (رفرفة) ± A.F.		
	■ General Examination :		• Pulse (for A.F.) 3 أرقام • Decubitus (for Orthopnea) 3 عامة • Edema in L.L. 3 موزعة (for Rt. Sided H.F.) • شوف خدوده لا يكون لونهم أحمر Malar Flush • "من النظري" Mechanism • it's Not Specific • D.D. from Systemic Lupus → Butterfly Rash ع مناخيره كمان		
	■ Local Examination : (Inspection, Palpation & Percussion)		• Left Atrial Enlargement لازم يحصل ± Right Vent. Enlargement ( <b>Never</b> Left Vent.) • Apex → Slapping Apex		
	■ Auscultation :	• Normal Sound	S1 : ↑ Accentuated • S1 may be Muffled in MS if there's Calcification or it's Double Mitral		
		• Murmur			
			• Time	Mid Diastolic with Pre-systolic Accentuation	
			• Character	Rumbling "يبرطم"	
			• Site	Apex	
		• Propagation	✗ Localized		
		• ↑↑ by	لما العيان : يميل على جنبه الشمال .. أو يعمل مجهود		
		+ Thrill			
		*Precaution : it's a <b>LOW Pitch</b> Sound .. Heard by the <b>CONE</b> + "حط السماعة خفيف"			
	• Additional Sounds	• Opening Snap (O.S.)			
■ Complication				Search for A.F. & Pulmonary HTN in The Cases	
■ Investigations				• The <b>Best Investigation</b> is <b>ECHO &amp; DOPPLER</b>	
1- ECG 2- X-ray 3- ECHO & DOPPLER • The <b>Main 4 Points in ECHO Report</b> are : - Valve Area ( <b>Assessment of Severity</b> ) - Pulmonary Pressure - Mitral Score - is there's a Thrombus or Not (By TEE)				4- Catheter : زمان "تقولها إذا الدكتور سأل عنها بس زمان" to detect if it's <b>Reversible</b> or Ir-reversible P. HTN - Reversible (due to V.C.) - while Ir-reversible (due to Fibrosis) هـ نخط القسطرة ونقيس الضغط لـ العيان .. وبعدين نحقن ( Vaso-Dilator ) ونقيس الضغط تاني .. إذا أختلف = <b>Reversible</b>	
■ Treatment				• Balloon-Mitral-Valvo-Plasty (Trans-Septal Technique) الأفضل	
Medically				Interventional	
The <b>Initial Starting Treatment for these Cases</b> is PROPHYLACTIC (Prevention of Rheumatic & IEC) "حسب الحالة فيها أيه" • Rest, Salt Retention & Diuresis ... for Dyspnea				Surgery	

Pulmonary Hypertension (P. HTN)		
Stage 1: ++ Pressure in Pulmonary Artery	Stage 2: Dilatation of Pulmonary Artery withOut Dilatation of Pulmonary Valve	Stage 3: Retract the Pulmonary Valve (Pulmonary Valve Regurg)
		
<p>Accentuated S2 &amp; Diastolic Shock ± Palpable S2</p> <p>S1</p> <p>S1</p>	<p>Accentuated S2</p> <p>Systolic MURMUR</p> <p>S1</p> <p>S1</p>	<p>Accentuated S2</p> <p>Diastolic MURMUR</p> <p>S1</p> <p>S1</p>
& you can Find a Pulmonary Pulsation & Dullness		
<p>سهل يتسمع بس تعملها كالتالي .. Move Your Stethoscope from the Left of the Sternum (Pulmonary Area) to the Right of it (Aortic Area) You will Find <b>S2 ++++</b> at <b>Pulmonary Area</b> than Aortic Area this = <b>Accentuated S2 with Accentuated Pulmonary Component</b></p>		<p><b>Diastolic MURMUR of Pulmonary Valve Regurg</b> = <b>Graham Steell Murmur</b> [is a heart murmur typically associated with pulmonary regurgitation. It is a <b>high pitched early diastolic</b> murmur heard best at the <b>left sternal edge in the second intercostal space</b> with the patient in <b>full inspiration</b>] This Murmur is in Unstable Patient (so, <b>Actually You will NOT hear it</b>)</p>

Double Aorta					Double Mitral				
مين ب يعمله ؟!									
Rheumatic Fever ONLY									
ب يعملها إزاي ؟!									
<p>via <b>Fibrosis</b> "يلحم ويكرمش"</p>  <p>Affect the Commissures → Stenosis</p> <p>Affect the Cusps → Regurg</p>					 <p><b>Double Lesion</b></p>				
					نعرفه إزاي ؟!				
Low COP .. up to Syncope (دوخة وزغلة) + Palpitation (رغرفة)					H/O Examination				
2 Murmurs should be heard					DYS-PNEA (كرشة نفس ونهجان) + Palpitation (رغرفة)				
<p><b>&amp;Take Care!</b> The Case may be A.R. Only .. Not Double Aorta</p> <p>in that A.R. Murmur is the <u>Organic</u> Diastolic Murmur while with Volume Overload</p> <p>→ it will produce <u>Functioning</u> Systolic A.S. Murmur</p> <p><b>*so you Should Diff. between Functioning &amp; Systolic A.S. Murmur</b></p>					<p>حسب مين الي له اليد العليا: S1</p> <p><b>أيه الي يشككني أن حالة الـ M.R. هي في الحقيقة Double Mitral ؟!</b></p> <ul style="list-style-type: none"> <li>- by H/O : Dyspnea start very Early before other Symptoms</li> <li>- by General Exam : A.F., Orthopnea "دخلت ع العيان لقيته قاعد"</li> <li>*N.B. M.R. Produce Orthopnea in Terminal Stage "ما ينزلش عملي"</li> <li>- by Local Exam : Rt. Vent. Enlargement , Pulmonary HTN "سمعته"</li> </ul>				
Organic A.S.	Harsh	طالع نازل	Thrill	H/O of Low COP	+ <b>S1</b> Accentuated				
Functioning A.S.	Soft	✗	✗	✗					
Peripheral Signs of A.R.					S1				
*if Marked Signs → A.R. is Predominant					*if Accentuated S1 → M.S. is Predominant				
Predominance Determined by									

C.O.P.D. Chronic Bronchitis + Emphysema						
■ Etiology :		• Pollution “Smoking” بس إحنا مش عارفين السبب الحقيقي أیه .. إما ب نتهم فيها الـ				
■ Complications :		• Recurrent Chest Infection <b>**الأشهر</b> • Cor-Pulmonale • Coughing				
■ H/O : بنطلع منه بـ 3 حجات	- Personal H/O	• Smoking • Working “مصنع أسمنت” • “محجل قطن .. مصنع أسمنت”		H/O يطلع لي أیه		
	- Present H/O	• Resp. Failure by Cyanosis “إذا طلع مش موجود ما تقولش أنك سألتته من الأساس” • Cor-Pulmonale by Systemic Venous Congestion “it’s Very Late Complication usually”		Etiology		
		• Chronic Coughing [يوميًا لمدة 3 أشهر متتالية في السنة الواحدة لمدة سنتين ع الأقل] • Expectoration [Important to exclude S.L.S. : Big, Purulent, Postural & Bad Odour & Bronchial Asthma] • Wheezes [CONTINUOUS] و Diff. from Bronchial Asthma • DYSPNEA [The LIMITING FACTOR]		Function & Complications		
				Main Diagnosis		
■ General Exam. :	- -VE	• NEVER Clubbing .. if You Find it , then the cause is something else				
	- Functional	• Cyanosis, Flapping Tremors & Disturbed Conscious Level				
	- Complications	لـ الكحة	• Eye Puffiness “فوق” • Hernia “تحت”			هـ تلاقي 3 نتائج
		لـ المرض	• Cor-Pulmonale [Lower Limb Edema, Liver Tender]			
		لـ العلاج	• All Pt. will be on Broncho-Dilator (β Agonist) → Arrhythmia & Tachy-Cardia ... and Fine Tremors • ± Steroids “مؤجل”			
			in rural areas .. the Pt. will take the Broncho-Dilator by (Injections) .. so, this is also a Complication → You Should search in these cases for Multiple Injection Signs			
			- D.D. of Multiple Injection Signs : • Addictions • Diabetes “Insulin Injection” • Chest “Broncho-Dilator”			
	Bilateral Disease					
	Signs of Hyper-inflation					
Signs of Narrowing						
± Signs of Resp. Difficulty (Resp. Ms. Action)						
■ Investigations :						
■ Treatment :						
The Aim of ttt is to Relief the Symptoms & +++ Survival						
الحالة سادة ..						
STOP FURTHER IRRITATION [العيان ده هـ نقوله .. سجاراتك أو عُمرِك !]						
A • Broncho-Dilators : COMINATION of 3 1- Sympathomimetic (β Agonist) “The MOST IMPORTANT” N.B. Long Acting is better than Short Acting 2- Parasympatholytic (Anti-Cholinergic) 3- Direct (Aminophylline) B • Remove Secretions : as it may be DRY → produce Mucous Plug → Lung Collapse						
>> Given by Inhalation (Nebulizer)						
#أشيله إزاي ؟! أحسن حاجة العيان يشرب مية كتييير (بـ التحديد مشروبات ساخنة) +++ Hydration بس في مشكلة .. أن المية الكثير ممكن تعمل << Cor-Pulmonale فـ هأبقى عايز أنزل المية ديه .. وأديله Diuretics فـ الأفضل أني أعمل له “حمامات بخار” .. Nebulizer H2O بدل ما أديله مية كثير ومتضرر أديله ومعها دوا ينزلها						
C • Home O2 Therapy (Domiciliary O2) : Daily “12-16 Hrs. / Day” for Relief Symptoms & +++ Survival						
O2 Tube or O2 Concentrator في مصر						
بـ يوصلوا له في البيت بره						
الحالة بـ إضافات ..						
• Infected [Yellow Expectoration + Late Inspiratory Crepitations] → Antibiotics • Cor-Pulmonale → Diuretics • Resp. Failure !						

# **Chest Investigations & Treatment of TB**

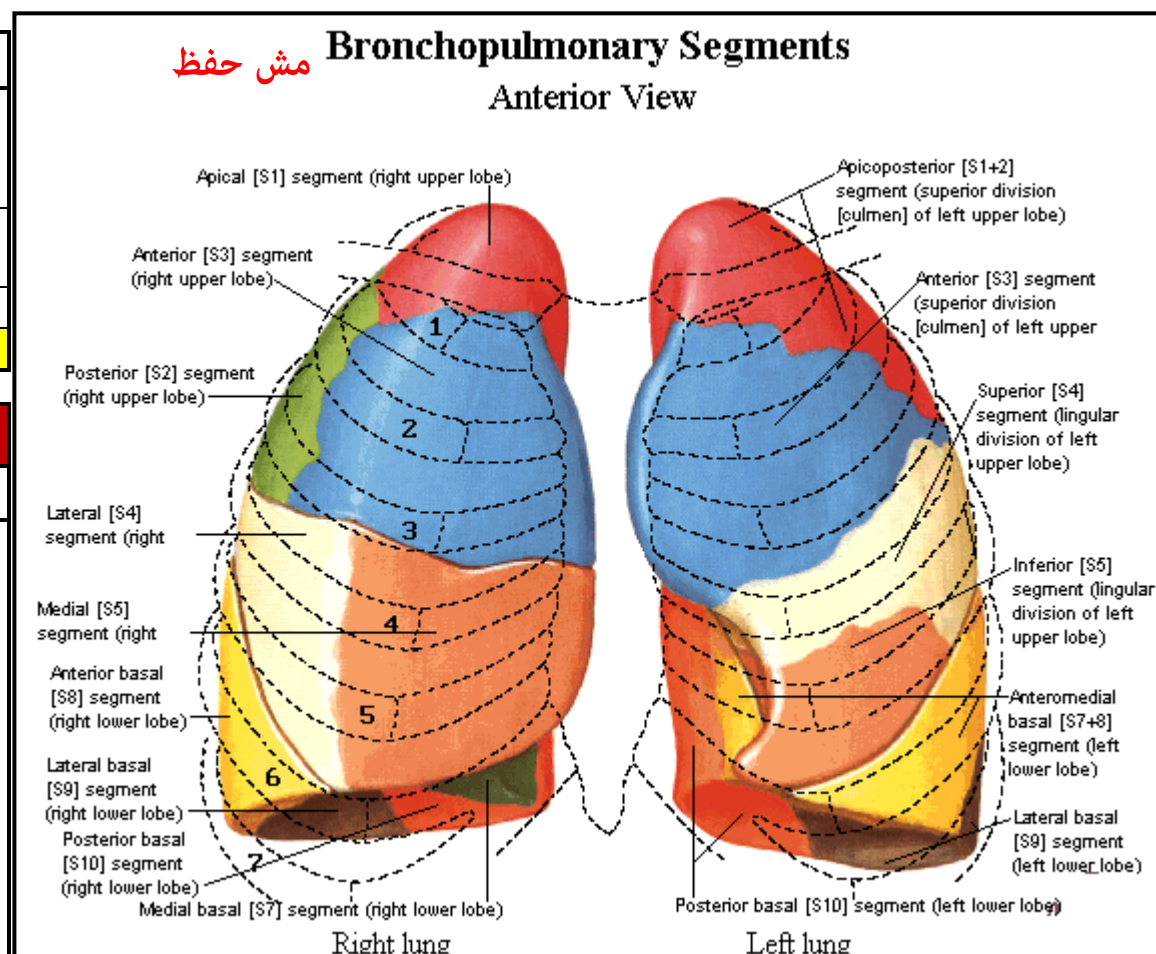


**\* Surface Anatomy of the Lung (Lobes & Fissures):** أشعة عملي (شفوي) هام

Back View	Lateral View	Front View	
<p>Mid-Line T3</p>	<p>Mid-Axillary Line (MXL) at 5<sup>th</sup> Rib or Space</p>	<p>Mid-Clavicular Line at 6<sup>th</sup> Inter-Costal Space</p>	<p><b>Greater Oblique Fissure</b></p>
It's called "Greater" as it's Appear in All 3 Views			
<ul style="list-style-type: none"> <li>• Mid-Line</li> <li>• Spinous Process of T3</li> </ul>	<ul style="list-style-type: none"> <li>• Mid-Axillary Line (MXL)</li> <li>• 5<sup>th</sup> Rib or Inter-Costal Space</li> </ul>	<ul style="list-style-type: none"> <li>• Mid-Clavicular Line (MCL)</li> <li>• 6<sup>th</sup> Inter-Costal Space</li> </ul>	Surface Anatomy
The Patient <b>Tilting his head Down</b> - the 1 <sup>st</sup> spine appear is <b>C7</b> .. then go Down	The Patient <b>Rise his hand</b> - the 1 <sup>st</sup> Rib to meet is <b>4<sup>th</sup></b> .. then go Down	معروفة يعني	نجيها إزاي
	<p>بـ يقابل زميله في نفس النقطة</p>	<p>at 4<sup>th</sup> Rib Rt. Lung Lt. Lung Upper Lobe Middle Lobe Lower Lobe</p>	<p><b>Lesser Transverse Fissure</b></p>
	<ul style="list-style-type: none"> <li>• Mid-Axillary Line (MXL)</li> <li>• 5<sup>th</sup> Rib or Inter-Costal Space</li> </ul>	<ul style="list-style-type: none"> <li>• Para-Sternal Line or Mid-Line</li> <li>• 4<sup>th</sup> Rib</li> </ul>	<p><b>On Rt. Side ONLY</b></p> <p>Surface Anatomy</p>

Rt. Lung	Lt. Lung
<b>2 Fissures</b> (Greater Oblique Fissure & Lesser Transverse Fissure)	<b>1 Fissures</b> (Greater Oblique Fissure Only)
<b>3 Lobes</b> (Upper, Middle & Lower)	<b>2 Lobes</b> (Upper & Lower)
<b>10 Broncho-Pulmonary Segments</b>	<b>9 Broncho-Pulmonary Segments</b>
Rt. Side > Lt. Side by 1 Always	

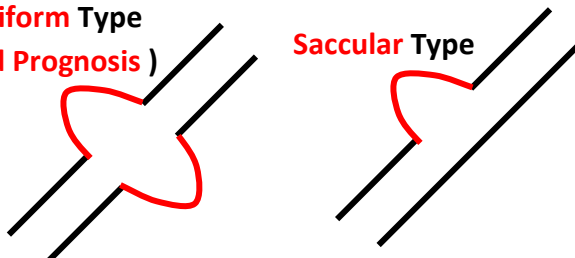
يتسألوا إزاي في العملي !؟	
1• Direct Qs .. What is the Surface Anatomy of Lung ?	
<b>2• Examine the Middle Lobe ?</b> - go to the <b>4<sup>th</sup> Inter-Costal Space</b> on the <b>RIGHT SIDE</b> , then <b>Move a little bit Lateral</b> , then Listen by Stethoscope <b>N.B. NEVER do it on THE LEFT SIDE or at the BACK</b>	<b>3• Examine the Apical Segment of Lower Lobe ? At the BACK</b> - Patient will <b>Sit Down</b> , then <b>Tilt his head Down</b> , the 1 <sup>st</sup> spine appear is <b>C7</b> .. then go Down to <b>T3</b> then Listen by Stethoscope




* Chest Investigations :					for		
<div>Investigation Scheme :</div> <div>1- Laboratory :<ul style="list-style-type: none"><li>Blood</li><li>Urine &amp; Stool</li><li>Others</li></ul></div> <div>2- Graph.</div> <div>3- Radiological :<ul style="list-style-type: none"><li>Plain X-ray</li><li>with Contrast</li><li>Others</li></ul></div> <div>4- U/S.</div> <div>5- C.T. &amp; MRI</div> <div>6- Nuclear Medicine</div> <div>7- Endoscopy</div> <div>8- Catheter</div> <div>9- Biopsy</div> <div>10- Others (P.F.T.)</div>		1 • Cor-Pulmonale : (will show Heart Failure or Rt. Vent. Enlargement)		- by H/O : History of Systemic Venous Congestion - by Examination : Rt. Sided Heart Failure Sign - by Investigation : <ul style="list-style-type: none"><li>✗ of Heart Failure → it's a CLINIACL Diagnosis (No Investigation)</li><li>✓ of +++ Rt. Vent. Enlargement → ECG "but all investigation will show it"</li></ul>			
		2 • Respiratory Failure : [it's Investigation Diagnosis]  * The Most Common Patient Liable to Complicate with Resp. Failure is COPD Pt. esp. Resp. Failure Type II		- it's Suggested Clinically by ( Cyanosis, Flapping Tremors & Disturbed Conscious Level ) - by Investigation : Arterial Blood Gases (ABG) *Arterial Sample ONLY .. for ( Pressure O <sub>2</sub> , Pressure CO <sub>2</sub> & pH ) N.B. Normal O <sub>2</sub> Pressure = 100% , Normal CO <sub>2</sub> Pressure = 40% # it's Resp. Failure when : PO <sub>2</sub> ↓ to 60% (it's a MUST to Find O <sub>2</sub> Level ↓) = HYPOXIA PCO <sub>2</sub> ↑ to 50% (it's Not a MUST ) = HYPERCAPNIA # there are 2 Types of Resp. Failure .. - Type I (Hypoxia Only)      فيه حاجة واحدة بس - Type II (Hypoxia & Hypercapnia)      فيه حاجتين			
1 • T.B.		see Later			Complications & Function		
2 • Irritation		- by H/O : Smoking, Working, ..... But Nothing in Investigation to be Done					
3 • Allergy [Bronchial Asthma, Asthmatic Bronchitis]		- by H/O : the Patient will complain of Symptoms و Characterized by : <ul style="list-style-type: none"><li>Paroxysmal Attacks</li><li>it has Precipitating Factors</li><li>it has Relieving Factors</li></ul> + Investigation Not Needed .. but upon Request we could do these Investigations "أي كلام كلهم" - Blood Picture : will find Eosinophilia & ↑ IgE - Sensitivity Tests					
					Etiology		
		1 <sup>st</sup> Investigation	then	then	then	Main Diagnosis	
1 • COPD		Plain X-ray	Pulmonary Function Tests will show Obstructive Pattern	—	—		
2 • S.L.S.	• Broncho-Ectasis	Sputum Analysis for Infection	Plain X-ray	Broncho-Graphy إذا مش شغال بـ نعمل ده	C.T.		± Broncho-Scope to Exclude Abscess
	• Lung Abscess	Sputum Analysis for Infection	Plain X-ray	± Broncho-Graphy to Exclude Broncho-Ectasis	C.T.		Broncho-Scope بنعمل الأثنين مع بعض لازم
3 • Pulmonary Fibrosis (Parenchymatous Type)		Plain X-ray	Pulmonary Function Tests will show Restrictive Pattern	—	—		—
4 • Pleural Effusion		Plain X-ray بنعمل الأثنين مع بعض تثبت أنه موجود	Aspiration عشان تعرف طبيعته	± Pleural Biopsy	—		—
5 • Surgery		—			—		

• Tuberculin Test			
[is a Skin Test that Detects <b>Delayed Hypersensitivity (Type IV)</b> Response to <u>Previous Exposure</u> of the Host to the Tubercle Bacilli] - it's one of the <b>Main Tests</b> used to <b>Diagnose LATENT Tuberculosis Infection</b>			
• Underlying Mechanism :	• as a Result of <u>Previous Exposure</u> of the host to Tubercle Bacilli → <b>Th1 Cells</b> are <u>Sensitized</u> , <u>Activated</u> & <u>Clonally Expanded</u> • <b>in +ve Reactors</b> ; the Injected Tuberculin Substance <b>Stimulate the Pre-Sensitized Th1 Cells</b> Th1 Cells → Secrete <b>Cytokines</b> و <b>Recruit Inflammatory Cells</b> Particularly <b>Macrophages</b> - the Result is a <b>Raised, Indurated Area around the Site of Injection</b> N.B. <b>No Reaction is seen in People who have Not been Sensitized to TB</b>		
• Technique :	• <b>0.1 ml</b> of Purified Protein Derivative (PPD) Containing <b>5 Tuberculin Unites (TU)</b> is Injected <b>Intra-Dermally</b> in the Skin of the <b>Anterior Aspect</b> of the Forearm • the Result is read <b>After 48-73 Hrs.</b> by <b>PALPATING</b> for the Presence of <b>INDURATION &amp; Measure its Diameter (NOT the Erythema)</b>		
• Interpretation :	Reaction have been Categorized by <b>Different Criteria (Risk Factors)</b> Depending on the Circumstances of the Patients		
	<b>"5-10-15 Millimeter System"</b>		
	<b>5</b>	<b>10</b>	<b>15</b>
	Indurations <b>5&gt;</b> ml.	Indurations <b>10&gt;</b> ml.	Indurations <b>15&gt;</b> ml.
	• Considered <b>Positive</b> for : - People who have <b>Had TB Disease before</b> - <b>Close Contacts of People with Infectious TB</b> - People with <b>HIV Infection</b>	• Considered <b>Positive</b> for : - People who in <b>Endemic Areas where TB is Common</b> - People with <b>Certain Medical Conditions e.g. Diabetes</b> - <b>Un-vaccinated Children Younger than 4 Years Old</b>	Considered <b>Positive</b> <b>*even in Absence of Any Risk Factors</b>
• False -ve Results :	<b>1- Anergy:</b> it's Inability to React to Tuberculin Test because of Weakened Immune System e.g. Severe TB Disease, HIV Infection or Cancer <b>2- Recent TB Infection:</b> after exposure, it takes 2 to 10 Weeks for Tuberculin Test to become +ve		
• False +ve Results:	<b>1- Infection with Non-Tuberculous Mycobacteria (NTM):</b> due to Cross-Reaction with M. tuberculosis Antigens <b>2- Vaccination with Bacille Calmette-Gu é rin (BCG):</b> after BCG Vaccination, Tuberculin Skin Test Remains +ve for up to 5 Years		



	± Technique		Indication تعمل لـ العيان أيه ؟!	Value هـ تبين أيه ؟!	± its Reading !؟ بيان إزاي ؟! see Para-Clinical Notes	
• Labs :						
1 • Sputum Analysis : مزرةة بلغم  (it's <u>Not</u> Investigation of Choice .. but, it may be the 1 <sup>st</sup> Investigation to be done)	# Analysis Aspects		العيان الي هـ أحتاج أديله مضاد حيوي • S.L.S. ONLY • COPD “when he Infected” <u>BUT</u> , In 90% of Cases of COPD .. the Organism is <b>Known</b> so, we Start <b>Empirical ttt</b> With <b>OUT</b> Sputum Analysis # when we do a Sputum Analysis for COPD Patient <u>?!</u> • if Empirical ttt <b>Failed</b> • if it's Associated with <b>Broncho-Ectasis</b>	—		
	a • Macroscopic	- Physical Properties - Chemical Analysis				
	b • Microscopic	- Cells - Organisms				
	c • Culture & Sensitivity	إذا الدكتور سأل ما تقولهاش من نفسك we can use <b>Broncho-Scope</b> to get clean Samples				
2 • Serous Aspirate Analysis : For Pleural Fluid	• via Thora-Centesis.. (we insert the Needle <b>ABOVE</b> the Rib to <u>Avoid Injury of the Intercostal Nerve</u> ) Then, do Analysis for the Aspirated Fluid as previous mentioned in sputum analysis		• <b>Pleural Effusion</b>	# by X-ray we will Diagnose the Pleural Effusion .. but we do Aspiration to <b>Categorize the Effusion</b> (Transudation, Exudation, Chylous & Malignant) See next page		
3 • Sweat Analysis : تقولها لما الدكتور يسألك	• give the Patient “ <b>Pilocarpine</b> ” to make him Sweat		• <b>Cystic Fibrosis</b> .. as it present as S.L.S.	—		
• Radiological :						
4 • Plain X-ray :	مؤجل		• <b>All Chest Cases</b>	For each Disease there's a Certain Pattern • in <b>Pleural Effusion</b> it's the Invest. Of Choice - in <b>Postero-Anterior View</b> & - in <b>Lateral View</b> for <u>Minimal</u> Effusion		
5 • Contrast <sup>هام*</sup> (Broncho-Graphy) :  ب ينزل في اللجئة ك أشعة N.B.	# المادة ما هي ؟!		• S.L.S. especially <b>Broncho-Ectasis</b> - It was the Investigation of Choice <u>until</u> the C.T. has been Discovered	• <b>Confirm the Diagnosis</b> .. as X-ray could Miss the Diagnosis • <b>Determine the Type of Broncho-Ectasis</b> ..  <div><div>Fusiform Type ( <b>Bad Prognosis</b> )</div><div>Saccular Type</div></div> • <b>Determine the Site (و Segment) العلاج</b> ب يحدد		
	✖ Lipidol (contain <b>Iodine</b> )	✓ Hytrast (و Now Used)				
	• <b>Iodine Sensitivity</b> • Fat Soluble → <b>Fat Embolism</b>	• <b>Free of Iodine</b> • <b>Water Soluble</b>				
	# ما هي طريقة إدخالها ؟!					
	via Broncho-Scope .. with Anesthesia					
	# أيه هي مشاكلها ؟!					
6 • C.T. :	مؤجل		• S.L.S. for <b>both</b> (Abscess & Broncho-Ectasis) * but for Broncho-Ectasis as the lesion is too Small, we use <u>High Resolution C.T. (HRCT)</u> with Minimal Thickness Cut (but it's <u>Much More Expensive</u> ) • <b>Interstitial Pulmonary Fibrosis</b>	—		
7 • Endoscope = Broncho-Scope : <sup>هام جداً شفوي*</sup>  “there are 2 Types : <b>Rigid</b> & <b>Fibro-Optic (Flexible)</b> ”	# What is the Indication for Broncho-Scope <u>?!</u> شفوي		• S.L.S. especially <b>Lung Abscess</b>	# What are the Value in Lung Abscess <u>?!</u> • to <b>Visualize the Lesion</b> • to <b>Take a Biopsy</b> (as 50% are Malignant) • to <b>Remove F.B.</b> (it's usually the Cause of Abscess)		
	Diagnostic	1• to Visualize the Lesion 2• to Take a Biopsy				From Lesions in Endothelium Lining Bronchi [Endo-Bronchial] e.g. Bronchogenic Carcinoma
		± <u>Broncho ALVEOLAR Lavage (BAL)</u> via Injection of Saline a wash the Alveoli .. the aspirate the wash and Analysis it				
	Therapeutic	1• Removal of F.B. or <b>Mucus Plug</b> 2• to Insert Medications : Antibiotics or Cyto-Toxic Drugs				
± <u>to Stop Severe Hemoptysis</u>						
8 • P.F.T.	See next page					

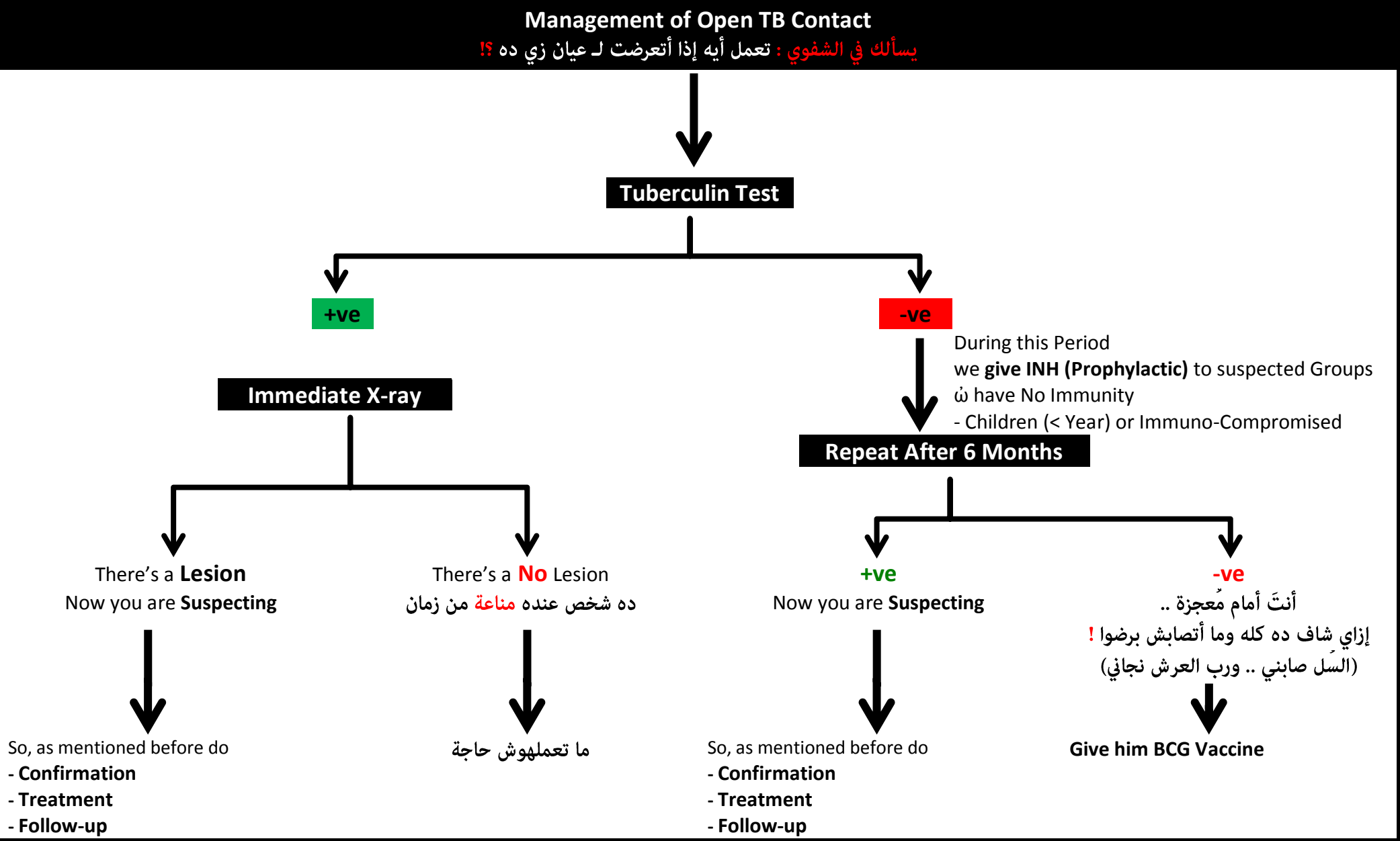
Pulmonary Function Tests (P.F.T.) مهم جداً جداً		
Spirometer مقياس التنفس		
• the Results will be express as a Graph (Spiro-Graph)		
1- <b>Ventilation</b> : the Air Enter the <b>Lung</b> Almost the Disease affect this Function → ↓ ( <b>Hypo-Ventilation</b> ) .. either • <b>Obstructive</b> الدُّنيا مسدودة e.g. COPD • <b>Restrictive</b> مش قادر أفتح e.g. Fibrosis & Effusion	1 • <b>Forced Vital Capacity (FVC)</b> [Volume of Air Expired by Max. Expiration following Max. Inspiration]	(FVC) (normally ≈ 5 Liters) العيان ياخذ أقصى نفس عنده .. وبعدين يخرج أقصى نفسه عنده (ومش مهم المدة اللي هـ يخرج فيها النفس)
2- Diffusion : the Air Enter the <b>Alveoli</b> 3- Perfusion : the Air exchange with <b>Blood</b>	2 • <b>Forced Expiratory Volume in 1<sup>st</sup> Second (FEV<sub>1</sub>)</b> .. it Depends on Diameter of Airway (as Diameter ↑ → ↑ FEV <sub>1</sub> ) [Volume of Air that has been Exhaled at the End of the 1 <sup>st</sup> sec. of Forced Expiration]	(FEV <sub>1</sub> ) (normally ≈ 4 Liters) العيان ياخذ أقصى نفس عنده .. وبعدين يخرج أقصى نفسه عنده .. ونحسب الهوا اللي خرج في أول ثانية بس
3 • <b>Forced Expiratory Ratio (FER) = FEV<sub>1</sub>/FVC ... *</b> in <b>COPD</b> , FER will ↓		(FER) (normally ≈ 4/5 = 80%)
N.B. Spirometer is <u>Expensive</u> & <u>Need an Expert Doctor to Do it</u> , so we Do it <b>Once</b> for Accurate Diagnosis & Determination of the Treatment .. then change into ( <b>Follow up Tests</b> )		
* <u>Indications</u> : • <b>COPD , Fibrosis</b> * <u>Value</u> : • to Know the Nature of Lesion (Obstructive, Restrictive or Mixed) • to Know the Degree of Lesion via % of FER (Prognostic Value) • to <b>Determine the Reversibility of Lesion</b> (e.g. in case of Broncho-Spasm .. do the test (FEV <sub>1</sub> ) .. then give the Patient Broncho-Dilator .. then Repeat the test (FEV <sub>1</sub> ) if it's Improved → it's Reversible Lesion) N.B. we have to <b>Determine the Reversibility of Lesion</b> as we will Treat the Patient with a <b>Drug for Life</b> which has also a <b>Side Effect</b> .. so we need to Know if this Drug is <b>Beneficial</b> or Not		
Peak Expiratory Flow Rate (PEFR) أسم الإختبار		
Peak Flow Meter أسم الجهاز		
		Flow Meter بـ يقيس معدل خروج الهواء في وحدة الزمن
		Peak لـ أنه الجهاز لما العيان ينفخ فيه المؤشر هـ يعلى لـ مستوى معين .. بس لما العيان يشيل بوقه من الجهاز .. المؤشر هـ يفضل مكانه في أعلى نقطة وصلها (إلا إذا العيان داس على زرار في الجهاز ورجعه لـ الصفر)
.. it Depends on Diameter of Airway (as Diameter ↑ → ↑ PEFR) .. & as the +++ PEFR .. this mean that the Patient Condition is <b>Improve</b> * <u>Technique</u> : • 1 <sup>st</sup> patient should take a 3 repetitive Respirations .. then he Expired the Air ★ N.B. <b>NOW .. the New Classification of Bronchial Asthma is Depend on (PEFR)</b>		
Match Test “very Famous but Not Accurate” الكبريت		Forced Expiratory Time (FET) “very Accurate”
بـ تشوف العيان يقدر يطفي عود الكبريت من على بُعد كام سم .. * بس خلي بالك : <b>العيان لازم يكون فاتح بوقه جامد</b> .. عشان ما يستخدمش عضلات بوقه في النفخ .. إحنا عايزين الهوا اللي خارج من الرئة بس * if Patient Can NOT Snuff Out the Match from a Distance < 15 Cm. .. this = <b>OBSTRUCTION</b>		بـ نخلي العيان يطلع نفس جامد & the Doctor <b>put the Stethoscope on the Trachea</b> by Stopwatch : Determine the Time for <b>Expiration</b> (as the Time +++ > 5 Sec. .. this = <b>OBSTRUCTION</b> ) N.B. the Results of this Test is Comparable to the Results of Spirometer 🏠 (يعني) المنظر كقدام الدكتور وكدزه

Categorize the Effusion				
Transudation		Exudation	Chylous	Malignant Effusion
< 3 gm %	Protein	> 3 gm %	• Milky White	• Hemorrhagic, Massive, Rapidly Re-Accumulating After Aspiration
< 1016	Sp. Gravity	> 1016	• Contains Many Fat	• Contains Malignant Cells
< 200 IU/L	LDH	> 200 IU/L	• Clear on Addition of Ether	• The Mediastinum may be Shifted to Same Side of Effusion due to Underlying Lung Collapse
< 1000 /ccm	Cells (WBCs)	> 1000 /ccm	• Stain Orange with Sudan III	

Tuberculosis (TB) “it’s a MICROBIOLOGY Disease” مهم جداً جداً عملي وشفوي** وتحريري				
N.B. TB is Included in Almost All Chest Cases		• <b>Pleural Effusion</b> as TB is the Commonest Cause • <b>Pulmonary Fibrosis</b> as TB is the Only Cause • <b>Lung Abscess</b> as TB is Producing Cavities in the Chest • <b>Broncho-Ectasis</b> as TB is Producing a Weakness in the Wall of Bronchi		ف في اللجنة لما ينزل العيان .. ب يبقى نص اللجنة ع المرض الموجود .. والنص الثاني على الـ TB
* <u>Diagnosis :</u>				
For Suspecting TB	1 • X-ray			
	2 • Tuberculin Test    discussed before			
For Confirmation of TB	3 • via Finding TB Bacilli in Samples			
	• What is the Possible Samples <b>?!</b> - <b>لازم Sputum</b> If Patient could Not Cough, The Doctor will <b>Encourage him to Cough</b> by Fluid Medication even in Children (they Swallow their Sputum) so, we Take the Sputum Sample via <b>Gastric Aspiration</b> N.B. we Take a <b>3 Sample</b> .. in <b>Different Times</b> - <b>Pleural Aspiration</b> <b>± Pleural Biopsy</b>		• What do we do for Samples <b>?!</b> <b>A - Staining (Ziehl–Neelsen stain)</b> <b>It’s a Specific Test but Not Sensitive</b> = if it’s +ve ٱ mean there’s Acid Fast (Resistant) Bacilli in Sample → Patient is Infected & you Have to Tell him (هتقوله العينة طلعت إيجابي) <u>but</u> if it’s -ve .. you still Suspect <b>B - Culture &amp; Sensitivity (Löwenstein–Jensen (L J) medium)</b> It take <b>More than 4 Weeks</b> * nowadays we use ( <b>Bactec medium</b> ) to Shorten the Time	
	We Need to be SURE about the Diagnosis .. because upon this we will Decide a Management Plan with a Long Period Drugs ٱ have a lot of Side Effects			
For Follow-up	4 • Clinically .. (الأعراض تتحسن ( ترجعله شهيته لـ الأكل .. ووزنه يزيد .. ويبطل يعرق )			
	5 • Radiological .. the Lesion will get Small			
	6 • ✓✓✓ MicroBiology ..			
	• -ve Sputum Sample (After 2 Months from Starting of Treatment) But .. Patient is Non-Infectious After 2 Weeks Only (as the Infectivity needs a Certain Number of Organism ٱ Decline after Starting of ttt) <u>Q: After 2 Months of Treatment .. the Sample Still +ve ! what is your Explanation ?!</u> - Faulty Treatment                      - it’s Resistant Strain			
* <u>Treatment :</u>				
Stage 1	• Sanatorium    مُستشفيات الصدر		It’s OBSOLETE nowadays	
Stage 2	• Surgeries			
Stage 3	• Medical Treatment			
Drugs (Anti-Tuberculous Drugs)				
1 <sup>st</sup> Line    # .. مطلوب فيهم كل حاجة .. = All of these Drugs I can Start the Treatment with it			2 <sup>nd</sup> Line    # مطلوب فيهم الأسم فقط .. ما عدا واحد = these Drugs have Many Side Effects	
Drug	Dose		Side Effects	N.B. <b>Para-Amino-Salicylic Acid (PASA) أبو قُرطاس</b> Previously it was Considered a 1 <sup>st</sup> Line Drug .. but after Discovering that it’s “Bacterio-Static” it turns to be 2 <sup>nd</sup> Line Drug معنى كده إن العيانيين إذا كانوا أخذوا الدواء من زمان .. ف هـ يكونوا أخذوا الدواء ده .. وجرة الدواء ده كانت 20 جرام كل يوم .. والقرص الواحد = نص جرام .. ف كانوا بـ يدوا العيان <b>قرطاس</b> في الأقراص ويقول له (قر قز) 🍷 ف العيان يجيلك الشيبيت يقولك وكنت بـ أخذ أبو قرطاس .. ف لازم تبقى عارفه
Isoniazid (INH)	5 mg/kg/day	Orally	- Hepato-Toxicity (CAH) - Peripheral Neuropathy mainly Sensory - Psychosis & Epilepsy - Lupus-Like Manifestations	
Rifampicin	10 mg/kg/day	Orally	- Hepato-Toxicity - GIT Irritation - Red Colored Urine	
Streptomycin	15 mg/kg/day	I.M.	- Nephro-Toxicity - Vertigo , Deafness - Ataxia , Nystagmus	
Ethambutol	25 mg/kg/day	Orally	- Optic Neuritis	
Pyrazinamide	30 mg/kg/day	Orally	- Hepato-Toxicity - Hyper-Uricemia	
Regimen				
1# Long Duration			2# Multiple Drugs	
• To <b>Prevent Relapse</b> as TB Bacilli <b>could Stay alive Inside Microphage</b> & After Death of Microphage the TB will Release .. Causing a <b>Relapse</b>			1 • To <b>Prevent Resistance Development</b> 2 • <b>Synergism</b> 3 • To <b>↓ Doses → ↓ Side Effects</b> 4 • To <b>↓ Duration of ttt</b>	
	Initiation ttt		Continuation ttt	
	• in the 1 <sup>st</sup> 2 Months                      • Not Less than 3 Drugs		• in the Rest of Treatment Time                      • 2 Drugs Only	
• <b>Standard Regimen (9M)</b> ده أتلغى	2 Months 1• Rifampicin 2• Isoniazid (INH) 3• Streptomycin or Ethambutol		7 Months 1• Rifampicin 2• Isoniazid (INH)	
• <b>Short Regimen (6M)</b> This now is the Standard	2 Months 1• Rifampicin                      زودت دواء واحد .. وقللت 3 شهور 2• Isoniazid (INH) 3• Streptomycin or Ethambutol 4• Pyrazinamide “it Kill TB Intracellular (Macrophage)”		4 Months 1• Rifampicin 2• Isoniazid (INH)	
• <b>Long Regimen (9 or 12M)</b>	# It Indicated in : • Extra-Pulmonary TB ( TB Meningitis, Bone, ....) • Immuno-Compromised Patients			

N.B. Nowadays, TB is <b>HOME Treatment Only</b> زمان كان في المُستشفيات		
Indication of Administration into Hospitals are :	1• Severe Pulmonary TB 2• Immuno-Compromised Patients 3• Resistant Cases	
طريقة إعطاء الدواء	• Non-Supervision Therapy (NST)	ب ندي العيان الدواء كل شهر .. وهو ياخده لوحده من غير ما حد يشرف عليه <b>عيبه</b> : أنه ممكن العيان ينسى ياخذ الدواء .. أو يبيع الدواء
	• Direct Observation Therapy (DOT)	في واحد ب يروح لـ العيان كل يوم يديله الدواء ويتأكد أنه أخذ الدواء <b>عيبه</b> : أنه لازم تُوفر موظف يعدي ع العيان كل يوم يديله الدواء
جُرعات الدواء	• Continuous Daily Dose	يومياً
	• Intermittent Weekly Dose	مرتين في الأسبوع (ب تجيب نفس النتائج + أسهل)
<b>* Multi-Drug Resistant TB (MDR-TB) :</b>		
• Definition :	[it's a TB ʁ Resistant to Both Rifampicin & INH]	
• Types :	• <b>1ry</b> : from the Start the Patient is Infected with a Resistant Strain	
	• <b>2ry</b> : Patient is Infected with Normal Strain .. but it Develop a Resistant with time	
• Risk Factors :	• <b>Faulty Treatment</b> e.g. the doctor start ttt with Only 1 Drug <u>or</u> Patient did not take the drugs • <b>Doctors &amp; Medical Students</b>	
• Diagnosis :	• ✓✓ via Culture & Sensitivity : ده الصح	
	• في مصر مش ب نعمل كده .. مع الأسف ب نبدأ العلاج ع طول .. وإذا العيان ما أستجابش ليه بعد شهور .. ب نشخص <b>!</b>	
• Treatment :	- <b>24 Months Continuous</b> - <b>Pyrazinamide</b> + Quinolones "ده اللي عليه خلاف في الأبحاث :)"	(N.B. absolutely we will not giving Rifampicin & INH)

N.B. nowadays .. there's a New term called **Extreme-Drug Resistant TB (XDR-TB)** [it's a TB ʁ Resistant to All Drugs]





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# **C**ARDIOLOGY

## **C**linical **C**ases

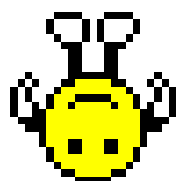
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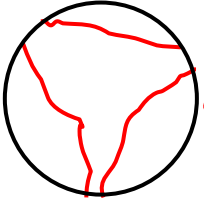
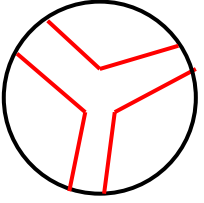
I Think we are Finish our Branch

from Dr. Ehab



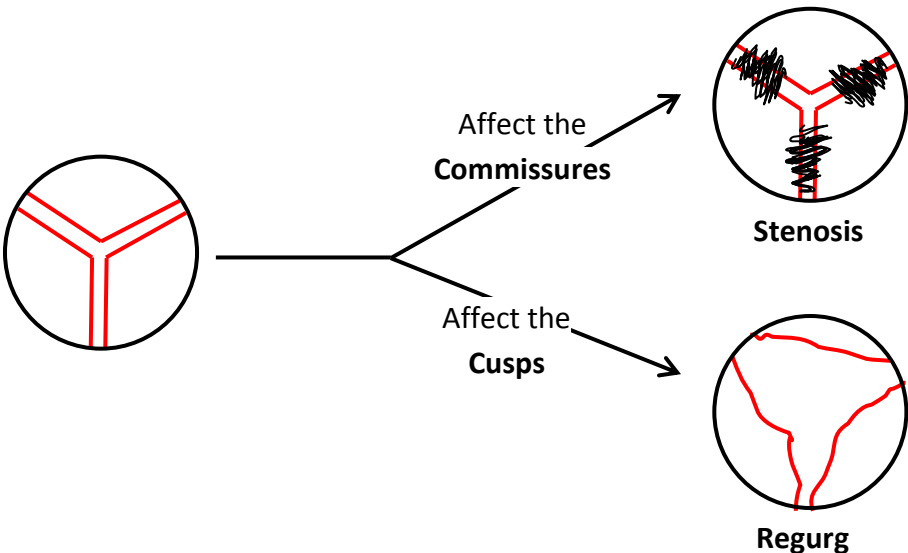
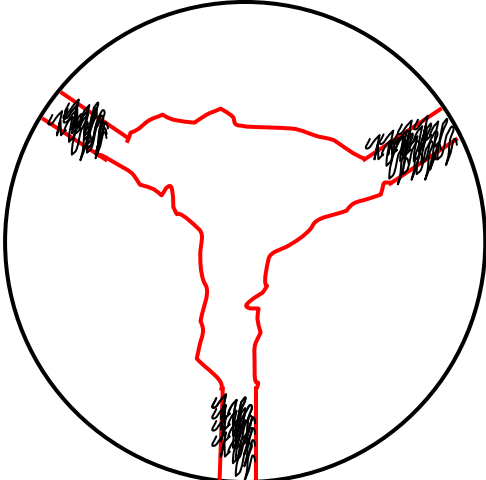


		Aortic Stenosis (A.S.)		Aortic Regurg (A.R.)		
■ Etiology :		• Congenital .. طفل • Rheumatic Fever .. متوسط العمر • Calcification .. عجوز		أسبابه كتييرة • The <b>COMMONEST</b> Cause in Egypt is Rheumatic Fever		
■ Clinical	■ H/O :	• Low COP .. up to Syncope (دوخة وزغللة)		• Palpitation (حاسس بـ رفرفة)		
		• then, <b>ANGINAL PAIN</b> .. for a Long Period * if Left Ventricular <b>FAILURE</b> occur → <b>Dyspnea</b> (كرشة نفس ونهجان) but it's <u>VERY LATE</u>				
	■ General Examination :	*here, it's Useless		★ <b>Peripheral Signs of A.R.</b> (إذا لقيتهم .. تعرف بيهم تشخيص الحالة ع طول)		
	■ Local Examination : (Inspection, Palpation & Percussion)	*here, it's Useless • Apex → <b>Sustained Apex</b>		• Apex → <b>Hyper-dynamic Apex (Volume Overload)</b> • <b>Aortic Pulsations</b> <b>Dancing Pericardium</b>		
		* if Left Ventricular <b>DILATATION</b> occur → <b>Apex will Shifted Outward &amp; Down</b>				
	■ Auscultation :	• Normal Sound	S2 : ↓ Muffled (بس مش شرط)		Normal (بس ديه آراء آراء .. في كتب كاتبة حجات مختلفة) it Depends on the Etiology	
		• Murmur				
			★ <b>MURMUR جداً سهل</b>			
			• Time Mid Systolic (Systolic Ejection)			
			• Character Harsh			
• Site 1 <sup>st</sup> Aortic Area						
• Propagation To Carotid & to Apex .. (طالع نازل)						
• ↑↑ by لما العيان : يميل لـ قدام .. أو يخرج نفسه						
N.B. The <b>SEVERITY</b> of the Disease is Detected by <u>Length of Murmur</u> & <u>Intensity of S2</u>						
• Additional Sounds	—					
■ Complication		Search for <b>A.F. &amp; Pulmonary HTN</b> in The Cases				
■ Investigations		by Scheme				
■ Treatment		by Scheme				
■ Oral Qs		• The <b>Most Common</b> Cause of A.S. in Egypt is <b>Rheumatic Fever</b> • The <b>Most Common</b> Cause of A.S. in the World is <b>Congenital</b>		• How Dose the Case could be <b>Isolated A.R. while the Etiology is Rheumatic Fever ?</b> - maybe it is <b>One of the Rare %</b> of Rh. Fever - maybe it is <b>Isolated in Auscultation</b> .. but in ECHO it's Double Leision		
		• The <b>Best Investigation</b> is <b>ECHO &amp; DOPPLER</b>		• The <b>Best Investigation</b> is <b>ECHO &amp; DOPPLER</b>		
		• The <b>Assessment of Severity</b> is done by <b>Pressure Gradient (ABP)</b> “if <b>More than 50 Difference</b> >> it's <b>Severe</b> ”		• The <b>Assessment of Severity</b> is done by its Effect on the Lt. Ventricle - for Degree of Dilatation ( <b>Dimensions</b> ) & for Function ( <b>Ejection Fraction</b> )		
		• The <b>Initial Starting Treatment for these Cases</b> is <b>PROPHYLACTIC</b> (Prevention of Rheumatic & IEC) “حسب الحالة فيها أيه”				
		• The <b>Treatment of Angina</b> is <b>Sub-Lingual Nitrate</b> (ياخد القرص وهو قاعد)		• The <b>Treatment Which Improves the Regurg</b> is <b>Small Dose of Vaso-Dilator (Captopril)</b>		
		• The <b>Patient Can go for Interventional Treatment with 2 Conditions must be fulfilled</b> is the Lesion is <b>Isolated &amp; Non-Calcified</b> → <b>Balloon-Aortic-Valvo-Plasty</b> (بس نتأجه وحشة)		• The <b>Patient Can NOT go for Interventional Treatment</b>		
				• The <b>2 Infection Diseases Could Cause A.R.</b> are <b>Syphilis &amp; Infective Endocarditis</b> • in A.R. Cases <b>Which Joints Do You Prefer to Exam for Diagnosis ?</b> • Peripheral Joints : - Big Joints .. for <b>Rheumatic</b> - Small Joints .. for <b>Rheumatoid</b> or <b>Marfan</b> \$ • Axial Joints : for <b>Ankylosing Spondylitis</b>		

in case of Aortic Regurg (A.R.) :			
■ the Apex :	Lt. Vent.    هو معمول من الـ → <b>Localized</b> Volume Overload    وبـ يتأثر بـ الـ → <b>Hyper-dynamic</b> Lt. Vent. Dilatation    فـ هـ يعمل .. → <b>Shifted Outward &amp; Down</b>		
■ Heart Sound :	it Depends on the Etiology		
	 In <b>Rheumatic Fever</b> Heart Sounds : ↓ <b>Muffled</b> كشكش	 Here, Heart Sounds : ↑ <b>Accentuated</b> المسافة ما بينهم كبرت	
■ if there's a Patient .. with (A.R. Murmur) + (M.S. Murmur) .. what's the Possibilities for that ?!		يسألك الدكتور .. تفرق ما بين 1 & 2 إزاي ؟!	
1-	He is an <b>A.R. Patient</b> .. with an <b>ORGANIC</b> A.R. Murmur , with <b>FUNCTIONING</b> M.S. Murmur .. و called [ <b>Austin-Flint Murmur</b> ] As the Blood و come back from Aortic Valve .. could Prevent Mitral Valve from Opening	<b>FUNCTIONING</b> M.S. Murmur	No Opening Snap + No Thrill
2-	He is a <b>Patient with A.R. + M.S. Lesions</b> ده يفسر حاجة .. This will <b>affect the Peripheral Signs of A.R. &amp; Decrease it</b> ويبوط حاجة .. This mean that the Etiology is <b>Rheumatic Fever</b> .. <b>Not</b> a Marfan \$ .. & even if you find Marfan Signs in the case this make it ( <b>Marfanoid</b> NOT Marfan \$)	<b>ORGANIC</b> M.S. Murmur	There's <b>Opening Snap</b> + <b>Thrill</b>

				Mitral Stenosis (M.S.)			Mitral Regurg (M.R.)					
■ Introduction for M.S. :				شكوته		Stages		هـ تسمع أيه بـ سماعتك ؟!				
				Dyspnea		1- Asymptomatic		M.S. Murmur Only				
				Low COP		2- Pulm. Congestion						
				Systemic Venous Congestion (Mainly Edema)				3- Pulmonary HTN		+ P. HTN		
						4- Rt. V.F.		+ if Rt. Vent Dilate → Retract the Tricuspid Ring → T.R. Murmur (may be heard)				
■ Etiology :				• Rheumatic Fever in 99% of cases <b>This the ONLY Disease which ISOLATED LEISION in Rheumatic Fever</b>								
■ Clinical	■ H/O :			• <b>DYSPNEA</b> (كرشة نفس ونهجان) → Low COP (دوخة وزغلة) → Systemic Congestion (Edema) المريض الوحيد اللي بـ يبدأ بـ كرشة نفس محترمة .. ولازم تهتم بيها وتعمل لها Stage (رفرفة) ± A.F.								
	■ General Examination :			• 3 أرقام <b>Pulse</b> (for A.F.) • 3 عامة <b>Decubitus</b> (for Orthopnea) • 3 موزعة <b>Edema in L.L.</b> (for Rt. Sided H.F.)			• شوف خدوده لا يكون لونهم أحمر <b>Malar Flush</b> • "من النظري" Mechanism • it's Not Specific • D.D. from Systemic Lupus → Butterfly Rash ع مناخيره كمان					
	■ Local Examination : (Inspection, Palpation & Percussion)			• Left Atrial Enlargement لازم يحصل ± Right Vent. Enlargement ( <b>Never</b> Left Vent.) • Apex → Slapping Apex								
	■ Auscultation :	• Normal Sound		S1 : ↑ Accentuated • S1 may be Muffled in MS if there's Calcification or it's Double Mitral								
		• Murmur		<div><div>S1</div><div>S2</div><div>MURMUR</div><div>لازق فيها</div></div>								
			• Time	Mid <b>Diastolic</b> with Pre-systolic Accentuation		• Effect of A.F. in Auscultation : - S1 → Variable Intensity - Murmur → No Pre-systolic Accentuation - O.S. → it Persist (لا تختفي)			Pan <b>Systolic</b>			
			• Character	Rumbling "يبرطم"					Soft (in 80% of cases) or Harsh			
			• Site	Apex					Apex			
	• Propagation		✗ Localized		To Axilla (in <b>Anterior Leaflet Disease</b> ) & to Base (in <b>Posterior Leaflet Disease</b> )							
	• ↑↑ by		لما العيان : يميل على جنبه الشمال .. أو يعمل مجهود				لما العيان : يميل على جنبه الشمال .. أو يعمل مجهود					
		*Precaution : it's a <b>LOW Pitch</b> Sound .. Heard by the <b>CONE</b> + "حط السماعة خفيف"										
• Additional Sounds		• <b>Opening Snap (O.S.)</b>										
■ Complication				Search for A.F. & Pulmonary HTN in The Cases								
■ Investigations				• The <b>Best Investigation</b> is <b>ECHO &amp; DOPPLER</b>								
				1- ECG 2- X-ray 3- <b>ECHO &amp; DOPPLER</b> • The <b>Main 4 Points in ECHO Report</b> are : - Valve Area ( <b>Assessment of Severity</b> ) - Pulmonary Pressure - Mitral Score - is there's a <b>Thrombus</b> or <b>Not</b> (By TEE)			4- Catheter : زمان "تقولها إذا الدكتور سأل عنها بس" to detect if it's <b>Reversible</b> or Ir-reversible P. HTN - Reversible (due to V.C.) - while Ir-reversible (due to <b>Fibrosis</b> ) هـ نخط القسطرة ونقيس الضغط لـ العيان .. وبعدين نحقن ( <b>Vaso-Dilator</b> ) ونقيس الضغط ثاني .. إذا أختلف = <b>Reversible</b>			- <b>ECHO &amp; DOPPLER</b> • The <b>Assessment of Severity</b> is done by its <b>Effect on the Lt. Ventricle</b> - for Degree of Dilatation ( <b>Dimensions</b> ) & for Function ( <b>Ejection Fraction</b> )		
■ Treatment				Medically		The <b>Initial Starting Treatment for these Cases</b> is <b>PROPHYLACTIC</b> (Prevention of Rheumatic & IEC) "حسب الحالة فيها أيه" • Rest, Salt Retention & Diuresis ... for Dyspnea			Interventional		• Balloon-Mitral-Valvo-Plasty (Trans-Septal Technique) الأفضل	
						Surgery						

Pulmonary Hypertension (P. HTN)		
Stage 1: ++ Pressure in Pulmonary Artery	Stage 2: Dilatation of Pulmonary Artery withOut Dilatation of Pulmonary Valve	Stage 3: Retract the Pulmonary Valve (Pulmonary Valve Regurg)
<div>Accentuated S2 &amp; Diastolic Shock ± Palpable S2</div> <div>S1</div> <div>S1</div>	<div>Accentuated S2</div> <div>S1</div> <div>S1</div> <div>Systolic MURMUR</div>	<div>Accentuated S2</div> <div>S1</div> <div>S1</div> <div>Diastolic MURMUR</div>
& you can Find a Pulmonary Pulsation & Dullness		
		<div>Diastolic MURMUR of Pulmonary Valve Regurg</div> <div>=</div> <div>Graham Steell Murmur</div> <div>[is a heart murmur typically associated with pulmonary regurgitation. It is a high pitched early diastolic murmur heard best at the left sternal edge in the second intercostal space with the patient in full inspiration]</div> <div>This Murmur is in Unstable Patient (so, Actually You will NOT hear it)</div>

Double Aorta					Double Mitral				
مين ب يعمله ؟!					Rheumatic Fever ONLY				
ب يعملها إزاي ؟!					via Fibrosis "يلحم ويكرمش"				
 <p>Affect the Commissures → Stenosis</p> <p>Affect the Cusps → Regurg</p>					 <p><b>Double Lesion</b></p>				
نعرفه إزاي ؟!					H/O Examination				
<b>Low COP .. up to Syncope (دوخة وزغلة) + Palpitation (رفرفة)</b> <b>2 Murmurs should be heard</b> <b>&amp;Take Care! The Case may be A.R. Only .. Not Double Aorta</b> in that <b>A.R. Murmur</b> is the <u>Organic</u> Diastolic Murmur while with Volume Overload → it will produce <u>Functioning</u> Systolic <b>A.S. Murmur</b> <b>*so you Should Diff. between Functioning &amp; Systolic A.S. Murmur</b>					<b>DYSPNEA (كرشة نفس ونهجان) + Palpitation (رفرفة)</b> <b>2 Murmurs should be heard</b> <b>S1: حسب مين الي له اليد العليا</b> <b>أيه الي يشككني أن حالة الـ M.R. هي في الحقيقة !? Double Mitral</b> - by H/O : Dyspnea start very Early before other Symptoms - by General Exam : A.F., Orthopnea "دخلت ع العيان لقيته قاعد" *N.B. M.R. Produce Orthopnea in Terminal Stage "ما ينزلش عملي" - by Local Exam : Rt. Vent. Enlargement , Pulmonary HTN "سمعته" <b>+ S1 Accentuated</b>				
Organic A.S.	Harsh	طالع نازل	Thrill	H/O of Low COP					
Functioning A.S.	Soft	×	×	×					
Peripheral Signs of A.R. *if Marked Signs → A.R. is Predominant					Predominance Determined by				
					S1 *if Accentuated S1 → M.S. is Predominant				



## ■ Tricuspid Regurg (T.R.)

## The Only Case for Rt. Sided Lesions

أشخصه إزاي

?

- by H/O : Symptoms of Systemic Venous Congestion (رجله تورم , جنبه يوجعه , الأكل يتعبه , \*بطنه تعلى قبل رجله ما تورم)

- by General Exam : Signs of Systemic Venous Congestion :

- 1• Neck Veins
- 2• Pulsating Liver
- 3• Edema + Ascites

- by Local Exam : Rt. Ventricular Enlargement & maybe Rt. Atrial Enlargement + T.R. Murmur

T.R. is NEVER to be Isolated in the Exam ..

it's ALWAYS ASSOCIATED with **ADVANCED** Mitral Valve Disease (MVD)

★ so, when you have a case of MVD in the Exam .. Search for :

①	حجات تخليني أشك أن مع الحالة في	T.R.	Systemic Venous Congestion	- by H/O : ( *بطنه تعالى قبل رجله ما تورم ) - by General Exam : Edema + Ascites - by Local Exam : Rt. Ventricular Enlargement	
But it Just let you SUSPECT ONLY .. as it may be an ADVANCED MVD reaching the Rt. Vent. Failure Level					
②	حجات تخليني أتأكد أن مع الحالة في	T.R.	It's Only by Hearing a T.R. Murmur by the Stethoscope		N.B. it's Similar to M.R. Murmur تفرقهم عن بعض إزاي ؟!
				بس دول تعتمد عليهم في العملي أكثر	
				1- Non specific 2- Non specific 3- Specific	تقولهم لما يطلب قولها الأول
				↑↑ by : +++ by Respiration (as any Rt. Sided Lesion) [this called Carvallo's sign]	
				بس الزيادة ديه .. ضئيلة جداً .. ومش في كل المرضى .. ومش في كل الضربات ..	
③	لما تتأكد من وجوده بهر حاجتين عشان ه يسألوك عليهم أكيد		1• Neck Veins : in T.R. it's - Level : Congested Pulsating - Wave Form : Systolic Expansion	2 بعدين خلي عينك ع وش العيان .. ودوس عشان تشوف الـ Tenderness	1 حوط الكبد ب إيديك الاثنين .. ودخل إيديك الشمال الأول .. ورا آخر Rib وبعدها دخل إيدك اليمين تحت الـ Costal Margin
			2• Pulsating Liver : Technique	3 بعدين ثبت أيدك ما تدوسش ثاني وشيل عينك من ع وش العيان وبص ع الكبد وتقول ل العيان : وقف نفسك	
			هتلاقي الكبد ب يطلع وينزل		

## ■ Valve Replacement Cases

هام جداً عملي (3)

①

أعرف إزاي أن العيان عامل  
Valve Replacement Surgery

- العيان ه يقول .. عملت عملية تبديل صمام
- by H/O :
  - by Exam : Median Sternotomy Scar

N.B.

we done A Replacement Surgeries for the Rt. Sides Valves in a **Very Very RARE Conditions** ..

due to **LOW PRESSURE** in Rt. Side + if Complications occur After Surgery they are **FATAL** (as Pulmonary Embolism)

So, **Most Probably** it's **Mitral** or **Aortic** Valve Replacement

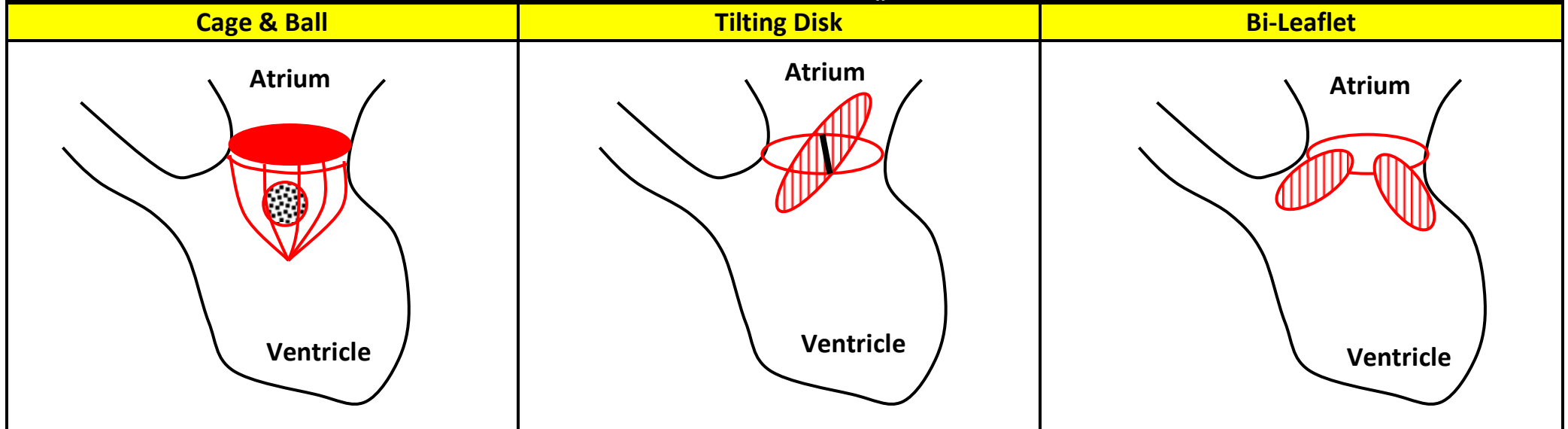
<div>العيان باجي لي عشان أجاب على 3 أسئلة</div> <div>②</div>	- by H/O:		- by Examination :
	1	<div>ما قبل العملية</div> <div>العيان كان ب يشتكي ب أيه ؟! تعرف الصمام اللي كان بايظ</div> <div>- which Valve is Replaced ?</div> <div>• if Patient Complain from Dyspnea <b>EARLY</b> → <b>Mitral Most Probably</b></div> <div>• if Patient Complain from <b>Anginal Pain</b> &amp; Palpiataion while Dyspnea is <b>LATE</b> → <b>Aortic Most Probably</b></div>	<div>- by <b>Local</b> Exam :</div> <div>ه تسمع صوت الصمام الصناعي <b>Load or Metallic Sound</b></div> <div>- by Timing :</div> <div>• in <b>S1</b> = <b>Mitral</b> Valve Replacement</div> <div>• in <b>S2</b> = <b>Aortic</b> Valve Replacement</div>
	2	<div>ما بعد العملية</div> <div>إذا العيان رجع يشتكي من نفس الأعراض .. So, Mal-Function occur</div> <div>- is The New Valve is Functioning or there's Mal-Function occur ?</div>	<div>- by <b>Local</b> Exam :</div> <div>- hearing a <b>MURMUR</b> → Mal-Function occur</div> <div>N.B. there's may be a <b>Functional Murmur</b> heard [Systolic, Soft, Short, Faint, Localized]</div>
	3	<div>ما بعد العملية</div> <div>- is there are Complications Occur After Surgery or Not ?</div> <div>a- Thrombo-Embolism</div> <div>b- Hemolytic Anemia</div> <div>c- Prosthetic Valve Endocarditis</div> <div>حصل لك تقل في أيديك أو لسانك</div> <div>أصفرية ولا لأ</div> <div>سخنت ولا لأ</div>	<div>- by <b>General</b> Exam :</div> <div>Normal Neural Examination &amp; you feel All <b>Peripheral Pulsations</b></div> <div>No <b>Pallor</b> or <b>Jaundice</b></div> <div>No <b>Hyper-Thermia</b> or <b>Clubbing</b></div>
	N.B. there's No Complicated Pt. will be in Our Exam → So, There's Always <b>No Major Complications</b> Found		

③

يسألوك على الحالة كذا سؤال

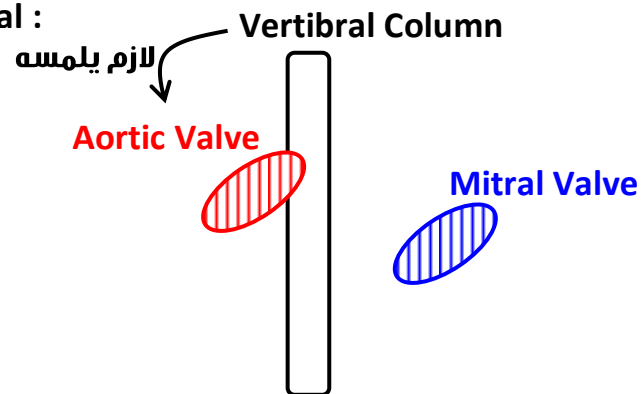
- what is the Investigations you want do for this patient ? by Scheme
- what is the Golden Stander in Investigations ? **ECHO \*esp. TEE & DOPPLER**
- what is the Treatment you want do for this patient ? by Scheme  
\*but, we Give Anti-Coagulant Drugs for Life

الصمام اللي بدلناه + الفرز تبعته .. هـ تبان في الأشعة ..  
وهما 3 أنواع اللي عندنا من الصمامات الصناعية ..



You will Know ء Valve is Replaced ..

- by Anatomical :



& by the Lesion in the Heart :

Causes of **Un-equal Pulse Volume** in Patient with Valve Replacement

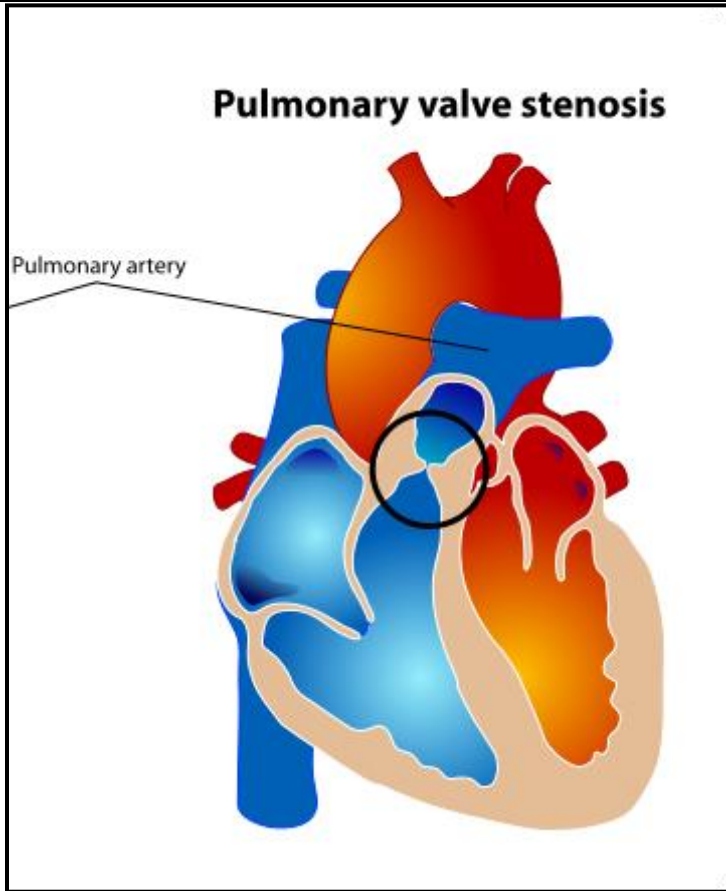
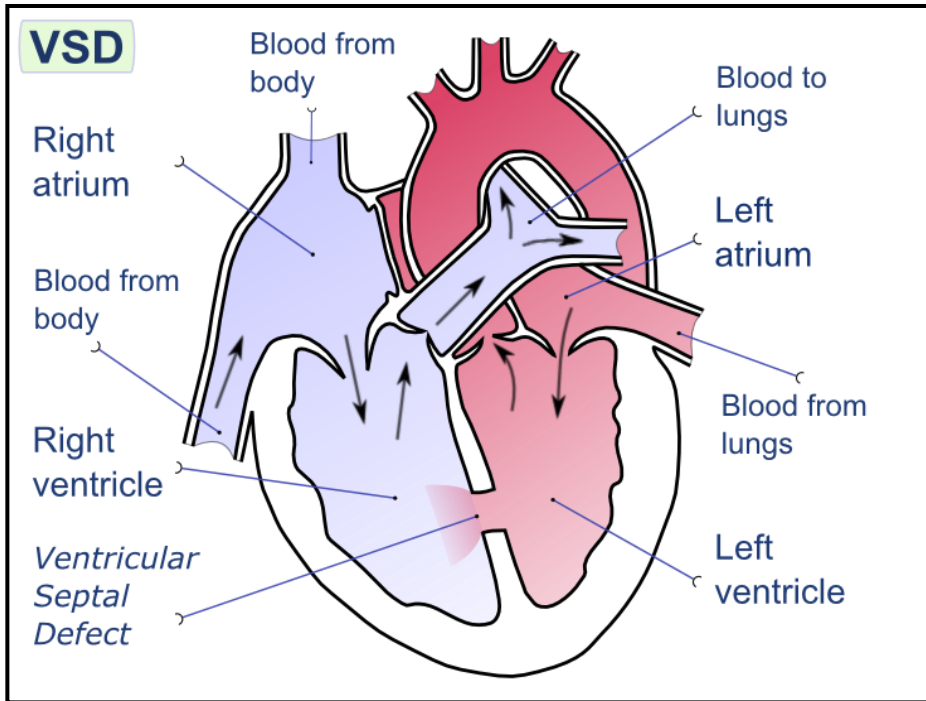
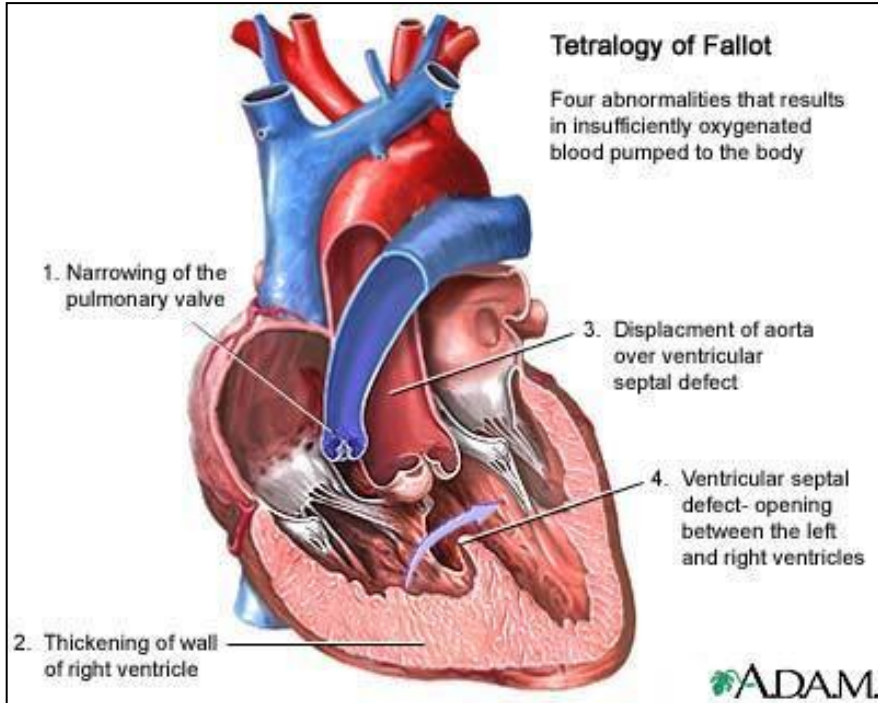
**A.F.** ده الأساس (sending Thrombus to the Hand)

■ **Valve Replacement Related :**

- Thrombus .. (if Patient didn't Receive Anti-Coagulant Regularly)
- Vegetation of Bacteria on Prosthetic Valve

■ **Association :**

- Cervical Rib
- Aneurism
- Pancoast Tumor

Congenital Heart Diseases									
	<p><b>Pulmonary Stenosis (P.S.)</b> *it's <b>ALWAYS CONGENITAL</b> .. Rh. Fever Never Affect Pulmonary Valve</p>	<p><b>Ventricular Septal Defect (VSD)</b> [The <b>Commonest</b> Heart Disease]</p>	<p><b>Fallot Tetralogy (F4)</b> [The <b>Commonest Cyanotic</b> Heart Disease]</p>						
									
1• Anatomy	There are <b>Valvular, Sub-Valvular &amp; Supra-Valvular Lesions</b>	There are <b>Small or Big Lesions</b>	<div>1• <b>Infundibular P.S.</b> “not in the Valve” → <b>Dynamic Stenosis</b> 2• <b>Anterior Position</b> Overriding Aorta → الصوت هـ يعلى في السماعه 3• <b>Very Big VDS</b> → مش شغال 4• <b>Very Mild ++ Rt. Vent.</b> → Undetected Clinically</div>						
2• Hemo-Dynamic	<b>P.S. is Similar to A.S. .. Except in :</b> - <b>Site of Murmur</b> - <b>Chamber Enlargement</b> - <b>ttt of Choice</b>	<div>• Heart → Volume Overload in 2 Sides • Lung → Plethora • Systemic Circulation → Low COP</div>		<b>Non-Oxygenated Blood in Aorta = Cyanosis</b>					
3• Complications		<b>Infective Endo-Carditis (IEC) &amp; at Late Stage : Eisenmenger's Syndrome</b>	<b>Infective Endo-Carditis (IEC)</b>						
4★ H/O ( <b>Symptoms</b> )	<div>Low COP Symptoms دوخة وزغلة</div> <div>N.B. <b>Noonan syndrome</b> could be Association: 1- Stunted Growth 2- Sub-normal Mentality 3- Congenital Heart Disease .. esp. P.S. 4- Skeletal Deformities 5- Facial Features</div>	<div>it Depends on the <b>Size of Defect</b></div> <div>• if <b>Small Lesion</b> → <b>Asymptomatic</b> • if <b>Very Big Lesion</b> → العيان يموت • if <b>Moderate Lesion</b> → Palpitation, Low COP دوخة وزغلة &amp; Dyspnea</div>	<div>1• <b>Cyanosis</b> “almost this is his Complaint” هـ يقولك أنا بـ أزرق It's Onset : <b>Shortly After Birth (from few weeks to Months)</b> <b>NOT</b> Since Birth “due to presence of PDA” <b>[Cyanosis Shortly After Birth → Pathognomonic to F4]</b> 2• Squatting العيان بـ يقرفص <b>Pathognomonic to F4</b> 3• <b>Cyanotic Spells</b> “Only in <b>SEVERE</b> Cases” هـام شفوي</div> <table><tr><th>3 Main Causes</th><th>Effect</th><th>3 Main Results</th></tr><tr><td>1• Exaggeration 2• Coldness 3• Infections</td><td>Spasm in Infundibular (All Blood in Aorta is Non-Oxygenated)</td><td>1• Deeply Cyanotic 2• Dyspnea 3• Convulsions</td></tr></table> <div>ttt of Cyanotic Spells: 1• Put the Patient in Squatting Position 2• O<sub>2</sub> Therapy 3• Drugs : β Blockers are the <b>Drug of Choice</b> here</div>	3 Main Causes	Effect	3 Main Results	1• Exaggeration 2• Coldness 3• Infections	Spasm in Infundibular (All Blood in Aorta is Non-Oxygenated)	1• Deeply Cyanotic 2• Dyspnea 3• Convulsions
3 Main Causes	Effect	3 Main Results							
1• Exaggeration 2• Coldness 3• Infections	Spasm in Infundibular (All Blood in Aorta is Non-Oxygenated)	1• Deeply Cyanotic 2• Dyspnea 3• Convulsions							

5 ★ Examination (Signs)	• Normal Sound S2 : ↓ Muffled	+ Chamber Enlargement (Rt. Vent.) أضخم Rt. Vent. في الطب	• General Exam. : No Cyanosis & No Clubbing	• General Exam. : Cyanosis depends on Severity & Clubbing depends on Duration + if Severe F4 → Stunted Growth بلا فائدة
	• Murmur • Time: Systolic Ejection • Character: Harsh • Site: Pulmonary Area • Propagation: To Carotid & to Apex .. (طالع نازل)		• Local Exam. : By hearing the MURMUR [↓ the Defect Size → ↑ Murmur Sound] • Time: Pan-Systolic • Character: Harsh • Site: Lt. Para-Sternal Area • Propagation: To All Auscultatory Areas .. (المفّري) • ↑↑ by: Exercise + Thrill	• Local Exam. : 1• فاخر Infundibular P.S. → P.S. MURMUR 2• Anterior Position Overriding Aorta → ↑ S2 3• Very Big VDS → ولا حاجة 4• مش فاخر Very Mild ++ Rt. Vent. → ولا حاجة كون أن ده فاخر وده مش فاخر .. ده يعني أن الدم ليه مخرجين .. وبكده عرفنا التشخيص .. ل أن أغلب الأمراض بـ يكون فيها الأثنين فاخرين ..
	• Additional Sounds Ejection Click		2 تشوف الثقب عمل أيه كـ Rt. Vent. or Lt. Vent. or BOTH Chamber Enlargement وي تلاقي يـ ما تلاقيش	
			3 تشوف الثقب عمل أيه في الـ For Eisenmenger's Syndrome as Pulmonary HTN Pulmonary Pressure	
6• Investigations	Best Investigation is : ECHO-Doppler & Assess the Severity by Pressure Gradient		ECHO-Doppler .. it will show : • The Defect • Any Chamber Enlargement • Pulmonary Pressure *الأهم	• E.C.G. • X-ray • ECHO-Doppler
7• Treatment	Balloon-Pulmonary-Valvo-Plasty is the ttt of Choice		• Medical ttt : Prevention of IEC (Antibiotics Before & After Any minimal Procedures) • Interventional ttt : Closure by Umbrella (via Catheter) • Definitive ttt : Open Heart Surgery .. Indicated to : Patient who are Liable to Develop Eisenmenger's Syndrome (Detected by Measuring Pulmonary Pressure) [if Pulmonary Pressure = ½ Systemic Pressure → Close the Defect]	• Medical ttt : Prevention of IEC (Antibiotics Before & After Any minimal Procedures) & for Cyanotic Spells give β Blockers • Interventional ttt : Useless ل أن المشكلة في العضلة • Definitive ttt : Closed Heart Surgery Shunt OperationS .. Shunt from Aorta to Pulmonary The most Famous is Blalock-Taussig Operation Open Heart Surgery Total Correction Operation (هـ نصلح كله :) 1• Infundibular P.S. → Resection وسعناه 2• Overriding Aorta → Closed in Rt. Vent. قفلناه 3• Very Big VDS → Very Big Patch سديناه 4• Very Mild ++ Rt. Vent. → سيبناه



## ■ Closed Heart Surgery Cases

For **Mitral Stenosis ONLY**

(Closed Mitral Valvotomy or Commissurotomy)

What Happen in M.S. ?!



**Fibrosis in Rh. Fever**

طري في النص

Rigid Cusps but Liable in the Center

• in Valve Opening : it Give **Opening Snap**

• in Valve Closure : it Give **↑ S1**

**& Both are Disappear with Calcification**

# **Murmur** Caused by the Stenosis itself

①	Indications	?	- by H/O : <b>Severe Symptoms (Dyspnea) Not Controlled Medically</b> or <b>Dangerous Symptoms (Hemoptysis)</b> - by Investigations : <b>ECHO-Doppler .. if Valve Area LESS than 1 Cm.</b>
②	Prerequisites	?	<b>Isolated Lesion (No M.R.) &amp; Not Calcified</b>
③	Contra-Indications	?	If <b>Double Lesion</b> or <b>Calcified</b>

- by H/O:

- by Examination :

العيان جاي لي عشان أجاب على 3 أسئلة	②	1	أعرف إزاي أن الحالة - Closed Commissurotomy	?	العيان هـ يقول : وسعوا لي صمام (عملت عملية توسيع)	- by Lateral (Infra-Mammary) Thoracotomy Scar
		في الطب عموماً .. واحد عامل جراحة وجاي ل الدكتور .. هما 3 احتمالات ..				
		1- for Follow-up الجراحة ناجحة :				
		2	طب العيان جاي لي ليه - هـ أعرف هو جايلي بـ أيه إزاي -	?	مش هـ يشككي من حاجة	س ل الإمتياز : إذا العملية ناجحة تسمع أيه ؟!
		3			No Murmur .. but still there are Opening Snap & ↑ S1	
		2- for Complications After Surgery (e.g. converted into M.R.)				
			Palpitation	Systolic Murmur		
			3- for Recurrence .. (Re-Stenosis - M.S.)			
	Dyspnea	Diastolic Murmur				

③	يسألوك على الحالة كذا سؤال	- in case of <b>Re-Stenosis ..</b> what is the Causes	?	• 99% it's <b>Recurrent Rheumatic Activity (Re-Fibrosis)</b> even if Patient didn't give a H/O of Rheumatic Activity [Subclinical Attack] • 1% <b>Under-Correction</b> from Surgeon <b>قولها على استحياء</b>
		- in case of <b>Failed Commissurotomy</b> what is the Treatment	?	<b>Valve Replacemnt</b>
		- is Incidence of Commissurotomy ↑ or ↓	?	↓ due to <b>Balloono-Plasty</b> is now Considered the ttt of Choice

Cardiology Scheme		
# How to Reach the Diagnosis ?!		
■ from H/O	<div>1• <b>Dyspnea</b> (كرشة نفس أو نهجان) from the Start → <b>M.S.</b></div> <div>2• <b>Ir-regular Palpitation</b> (رغرفة ملخفنة) in the course of Disease → <b>A.F.</b> most probably with <b>M.S.</b></div> <div>3• <b>Systemic Venous Congestion Symptoms</b> (رجله ورمت وبطنه عليت وجنبه بيوجعه والأكل بيتعبه) → <b>T.R.</b> (have to be associated with <b>MVD</b>)</div> <div>4• <b>Low COP Symptoms</b> (دوخة وزغللة وإغماء) ± <b>Angina Pain</b> from the Start → <b>A.S.</b></div> <div>5• <b>Regular Palpitation</b> (رغرفة منتظمة) from the Start → <b>Regurge</b> (M.R. or A.R.)</div> <div>6• <b>Cyanosis</b> (بيزرق) + <b>Squatting</b> (بيقرقص) from the Start → <b>F4</b></div> <div>7• <b>Young Onset Complain</b> (العيان بدأ يشتكي من وهو صغير أيأ كان التشخيص) → Etiology is <b>Congenital</b></div>	
■ from General Exam	<div>1• <b>Blood Pressure</b> : ↑ <b>Systole</b> / ↓↓ <b>Diastole</b> = <b>Pulse Volume</b> &gt; 60 → <b>A.R.</b> (&amp; search for Other Peripheral Signs of A.R.)</div> <div>2• <b>Pulse</b> : Ir-regular → <b>A.F.</b> → <b>M.S.</b> (&amp; Revise the between A.F. &amp; Extra-Systole)</div> <div>3• <b>Orthopnea</b> ("قاعد") → <b>M.S.</b> (دخلت ع المريض لقيته مش قادر ينام "قاعد")</div> <div>4• <b>L.L. Edema</b> or <b>Ascites</b> → <b>T.R.</b> (have to be associated with <b>MVD</b>)</div> <div>5• <b>Cyanosis</b> or <b>Clubbing</b>→ <b>F4</b></div> <div>6• <b>Very Tall &amp; Thin Patient</b> → <b>Marfan \$</b> (&amp; search for Other Signs of Marfan \$) → <b>A.R.</b></div> <div>7• <b>Stunted Growth</b> (العيان قصير جداً) → <b>Congenital</b> (either it's <b>The Cause esp. if Sever</b>, or it's <b>Association</b> as Down \$ or Noonan \$)</div>	
■ from Local Exam	<div>1<sup>st</sup> <b>Auscultation</b> هـ تسمع في مكانين</div>	<div>1<sup>st</sup> Put the Stethoscope on <b>2nd Aortic Area</b> : If you Hear a <b>Murmur</b></div> <div><div><div><b>Systolic Murmur</b></div><div>Then you have to move in the 4 Directions to get the <b>SITE OF MAX. INTENSITY</b> وأوعى تقول التشخيص قبل ما تتحرك فوق وتحت ويمين وشمال ..</div><div><div>• if Site of Max. Intensity is <b>Apex</b> → <b>M.R. (Posterior Leaflet)</b></div><div>• if Site of Max. Intensity is <b>Pulmonary Area</b> → <b>P.S.</b></div><div>• if Site of Max. Intensity is <b>Tricuspid Area</b> → <b>T.R.</b> (associated with <b>MVD</b>)</div><div>• if Site of Max. Intensity is <b>1st Aortic Area</b> + reaching the Carotid → <b>A.S.</b></div><div>• if the Sound is ↓↓ wherever you Move → <b>VSD</b></div></div></div><div><div><b>Diastolic Murmur</b></div><div>Then it's <b>A.R.</b> + <b>Peripheral Signs</b> will lead you</div></div></div> <div>2<sup>nd</sup> Put the Stethoscope on <b>Apex</b> : سواء سمعت حاجة في اللي قبله أو ما سمعتش ع طول <b>Murmur = MVD</b></div> <div>Now, Search if it Localized or Propagated .. by moving the Stethoscope to the Axilla</div> <div><div><div><b>Propagated to Axilla</b></div><div><b>M.R. (Anterior Leaflet)</b> + it's <b>Systolic</b></div></div><div><div><b>Localized</b></div><div><b>M.S.</b> + it's <b>Diastolic</b></div></div></div> <div></div>
then <b>Inspection + Palpation &amp; Percussion</b>	<div>to Detect <b>Any Chamber Enlargement</b> + أنتا عارف أيهم ممكن يكبر بعد ما جبت التشخيص من اللي فوق فـ هـ تدور بـ ذمة</div>	

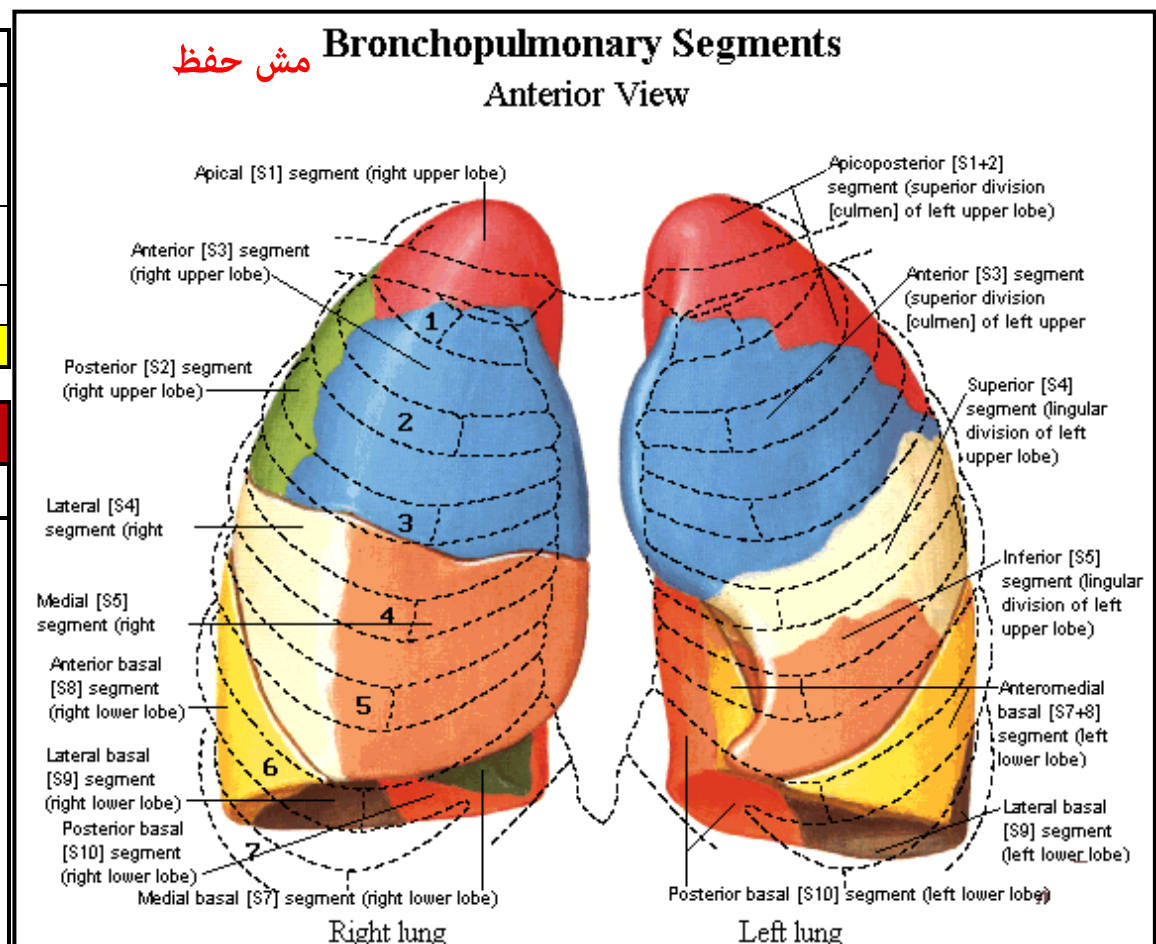
# Chest Investigations & Treatment of TB .. from Dr. Ehab

\* Surface Anatomy of the Lung (Lobes & Fissures) : **أشعة عملي (شفوي) هام**

Back View	Lateral View	Front View	
<p>Mid-Line T3</p>	<p>Mid-Axillary Line (MXL) at 5<sup>th</sup> Rib or Space</p>	<p>Mid-Clavicular Line at 6<sup>th</sup> Inter-Costal Space</p>	<b>Greater Oblique Fissure</b>
It's called "Greater" as it's Appear in All 3 Views			
<ul style="list-style-type: none"> <li>Mid-Line</li> <li>Spinous Process of T3</li> </ul>	<ul style="list-style-type: none"> <li>Mid-Axillary Line (MXL)</li> <li>5<sup>th</sup> Rib or Inter-Costal Space</li> </ul>	<ul style="list-style-type: none"> <li>Mid-Clavicular Line (MCL)</li> <li>6<sup>th</sup> Inter-Costal Space</li> </ul>	Surface Anatomy
The Patient <b>Tilting his head Down</b> - the 1 <sup>st</sup> spine appear is <b>C7</b> .. then go Down	The Patient <b>Rise his hand</b> - the 1 <sup>st</sup> Rib to meet is <b>4th</b> .. then go Down	معروفة يعني	نجيبها إزاي
	<p>ب يقابل زميله في نفس النقطة</p>	<p>at 4<sup>th</sup> Rib Rt. Lung Lt. Lung Upper Lobe Middle Lobe Lower Lobe</p>	<b>Lesser Transverse Fissure</b>
	<ul style="list-style-type: none"> <li>Mid-Axillary Line (MXL)</li> <li>5<sup>th</sup> Rib or Inter-Costal Space</li> </ul>	<ul style="list-style-type: none"> <li>Para-Sternal Line or Mid-Line</li> <li>4<sup>th</sup> Rib</li> </ul>	<b>On Rt. Side ONLY</b> Surface Anatomy

Rt. Lung	Lt. Lung
<b>2 Fissures</b> (Greater Oblique Fissure & Lesser Transverse Fissure)	<b>1 Fissures</b> (Greater Oblique Fissure Only)
<b>3 Lobes</b> (Upper, Middle & Lower)	<b>2 Lobes</b> (Upper & Lower)
<b>10 Broncho-Pulmonary Segments</b>	<b>9 Broncho-Pulmonary Segments</b>
Rt. Side > Lt. Side by 1 Always	

يتسألوا إزاي في العملي !؟	
1• Direct Qs .. What is the Surface Anatomy of Lung ?	
<b>2• Examine the Middle Lobe ?</b> - go to the <b>4<sup>th</sup> Inter-Costal Space</b> on the <b>RIGHT SIDE</b> , then <b>Move a little bit Lateral</b> , then Listen by Stethoscope <b>N.B. NEVER do it on THE LEFT SIDE or at the BACK</b>	<b>3• Examine the Apical Segment of Lower Lobe ?</b> <b>At the BACK</b> - Patient will <b>Sit Down</b> , then <b>Tilt his head Down</b> , the 1 <sup>st</sup> spine appear is <b>C7</b> .. then go Down to <b>T3</b> then Listen by Stethoscope



* Chest Investigations :					for
<div>Investigation Scheme :</div> <div>1- Laboratory :<ul style="list-style-type: none"><li>Blood</li><li>Urine &amp; Stool</li><li>Others</li></ul></div> <div>2- Graph.</div> <div>3- Radiological :<ul style="list-style-type: none"><li>Plain X-ray</li><li>with Contrast</li><li>Others</li></ul></div> <div>4- U/S.</div> <div>5- C.T. &amp; MRI</div> <div>6- Nuclear Medicine</div> <div>7- Endoscopy</div> <div>8- Catheter</div> <div>9- Biopsy</div> <div>10- Others (P.F.T.)</div>		1 • Cor-Pulmonale : (will show Heart Failure or Rt. Vent. Enlargement)		- by H/O : History of Systemic Venous Congestion - by Examination : Rt. Sided Heart Failure Sign - by Investigation : <ul style="list-style-type: none"><li>✖ of Heart Failure → it's a CLINIACL Diagnosis (No Investigation)</li><li>✓ of +++ Rt. Vent. Enlargement → ECG "but all investigation will show it"</li></ul>	
		2 • Respiratory Failure : [it's Investigation Diagnosis]  * The Most Common Patient Liable to Complicate with Resp. Failure is COPD Pt. esp. Resp. Failure Type II		- it's Suggested Clinically by ( Cyanosis, Flapping Tremors & Disturbed Conscious Level ) - by Investigation : <b>Arterial Blood Gases (ABG) * Arterial Sample ONLY ..</b> for ( Pressure O <sub>2</sub> , Pressure CO <sub>2</sub> & pH ) N.B. Normal O <sub>2</sub> Pressure = 100% , Normal CO <sub>2</sub> Pressure = 40% <b># it's Resp. Failure when :</b> 	



• Tuberculin Test			
[is a Skin Test that Detects Delayed Hypersensitivity (Type IV) Response to Previous Exposure of the Host to the Tubercle Bacilli]			
- it's one of the Main Tests used to Diagnose LATENT Tuberculosis Infection			
• Underlying Mechanism :	<ul style="list-style-type: none"> <li>as a Result of Previous Exposure of the host to Tubercle Bacilli → Th1 Cells are Sensitized, Activated &amp; Clonally Expanded</li> <li>in +ve Reactors; the Injected Tuberculin Substance Stimulate the Pre-Sensitized Th1 Cells</li> <li>Th1 Cells → Secrete Cytokines و Recruit Inflammatory Cells Particularly Macrophages</li> <li>the Result is a Raised, Indurated Area around the Site of Injection</li> <li>N.B. No Reaction is seen in People who have Not been Sensitized to TB</li> </ul>		
• Technique :	<ul style="list-style-type: none"> <li>0.1 ml of Purified Protein Derivative (PPD) Containing 5 Tuberculin Unites (TU) is Injected Intra-Dermally in the Skin of the Anterior Aspect of the Forearm</li> <li>the Result is read After 48-73 Hrs.</li> <li>by PALPATING for the Presence of INDURATION &amp; Measure its Diameter (NOT the Erythema)</li> </ul>		
• Interpretation :	Reaction have been Categorized by Different Criteria (Risk Factors) Depending on the Circumstances of the Patients		
	"5-10-15 Millimeter System"		
	5	10	15
	Indurations 5> ml.	Indurations 10> ml.	Indurations 15> ml.
	<ul style="list-style-type: none"> <li>Considered Positive for :</li> <li>People who have Had TB Disease before</li> <li>Close Contacts of People with Infectious TB</li> <li>People with HIV Infection</li> </ul>	<ul style="list-style-type: none"> <li>Considered Positive for :</li> <li>People who in Endemic Areas where TB is Common</li> <li>People with Certain Medical Conditions e.g. Diabetes</li> <li>Un-vaccinated Children Younger than 4 Years Old</li> </ul>	Considered Positive *even in Absence of Any Risk Factors
• False -ve Results :	1- Anergy: it's Inability to React to Tuberculin Test because of Weakened Immune System e.g. Severe TB Disease, HIV Infection or Cancer 2- Recent TB Infection: after exposure, it takes 2 to 10 Weeks for Tuberculin Test to become +ve		
• False +ve Results:	1- Infection with Non-Tuberculous Mycobacteria (NTM): due to Cross-Reaction with M. tuberculosis Antigens 2- Vaccination with Bacille Calmette-Gu é rin (BCG): after BCG Vaccination, Tuberculin Skin Test Remains +ve for up to 5 Years		



	± Technique		Indication تعمل لـ العيان أيه ؟!	Value هـ تبين أيه ؟!	بيان إزاي ؟! its Reading see Para-Clinical Notes	
• Labs :						
1 • Sputum Analysis : مزرعة بلغم  (it's <u>Not</u> Investigation of Choice .. but, it may be the 1 <sup>st</sup> Investigation to be done)	# Analysis Aspects		العيان يبصق .. غالباً العينة هـ تكون متلوثة .. Usually the Sample will be Contaminated by Oral Commensals Bacteria  إذا الدكتور سأل ما تقولهاش من نفسك we can use Broncho-Scope to get clean Samples	—	↓	
	a • Macroscopic	- Physical Properties - Chemical Analysis				
	b • Microscopic	- Cells - Organisms				
	c • Culture & Sensitivity					
2 • Serous Aspirate Analysis : For Pleural Fluid	• via Thora-Centesis.. (we insert the Needle ABOVE the Rib to Avoid Injury of the Intercostal Nerve) Then, do Analysis for the Aspirated Fluid as previous mentioned in sputum analysis		• Pleural Effusion	# by X-ray we will Diagnose the Pleural Effusion .. but we do Aspiration to Categorize the Effusion (Transudation, Exudation, Chylous & Malignant) See next page		
3 • Sweat Analysis : تقولها لما الدكتور يسألك	• give the Patient “Pilocarpine” to make him Sweat		• Cystic Fibrosis .. as it present as S.L.S.	—		
• Radiological :						
4 • Plain X-ray :	مؤجل		• All Chest Cases	For each Disease there's a Certain Pattern • in Pleural Effusion it's the Invest. Of Choice - in Postero-Anterior View & - in Lateral View for Minimal Effusion		
5 • Contrast هام* (Broncho-Graphy) :  ب ينزل في اللجنة ك أشعة .N.B.	# المادة ما هي ؟!		• S.L.S. especially Broncho-Ectasis - It was the Investigation of Choice until the C.T. has been Discovered	• Confirm the Diagnosis .. as X-ray could Miss the Diagnosis • Determine the Type of Broncho-Ectasis .. <div><div>Fusiform Type ( Bad Prognosis )</div><div>Saccular Type</div></div> • Determine the Site (و Segment) العلاج ب يحدد		
	✗ Lipidol (contain Iodine)	✓ Hytrast (و Now Used)				
	• Iodine Sensitivity • Fat Soluble → Fat Embolism	• Free of Iodine • Water Soluble				
	# ما هي طريقة إدخالها ؟!					
	via Broncho-Scope .. with Anesthesia					
	# أيه هي مشاكلها ؟!					
	1- Iodine Allergy 2- Anesthesia Complication	3- Fat Embolism 4- Spread of Infection in Acute Attack				
6 • C.T. :	مؤجل		• S.L.S. for both (Abscess & Broncho-Ectasis) * but for Broncho-Ectasis as the lesion is too Small, we use High Resolution C.T. (HRCT) with Minimal Thickness Cut (but it's Much More Expensive) • Interstitial Pulmonary Fibrosis	—		
7 • Endoscope = Broncho-Scope : هام جداً شفوي*  “there are 2 Types : Rigid & Fibro-Optic (Flexible)”	# What is the Indication for Broncho-Scope ؟! شفوي		• S.L.S. especially Lung Abscess	# What are the Value in Lung Abscess ؟! • to Visualize the Lesion • to Take a Biopsy (as 50% are Malignant) • to Remove F.B. (it's usually the Cause of Abscess)		
	Diagnostic	1• to Visualize the Lesion 2• to Take a Biopsy				From Lesions in Endothelium Lining Bronchi [Endo-Bronchial] e.g. Bronchogenic Carcinoma
		± Broncho ALVEOLAR Lavage (BAL) via Injection of Saline a wash the Alveoli .. the aspirate the wash and Analysis it				
		Therapeutic				1• Removal of F.B. or Mucus Plug 2• to Insert Medications : Antibiotics or Cyto-Toxic Drugs
± to Stop Severe Hemoptysis						
8 • P.F.T.	See next page					



## Pulmonary Function Tests (P.F.T.) مهم جداً جداً

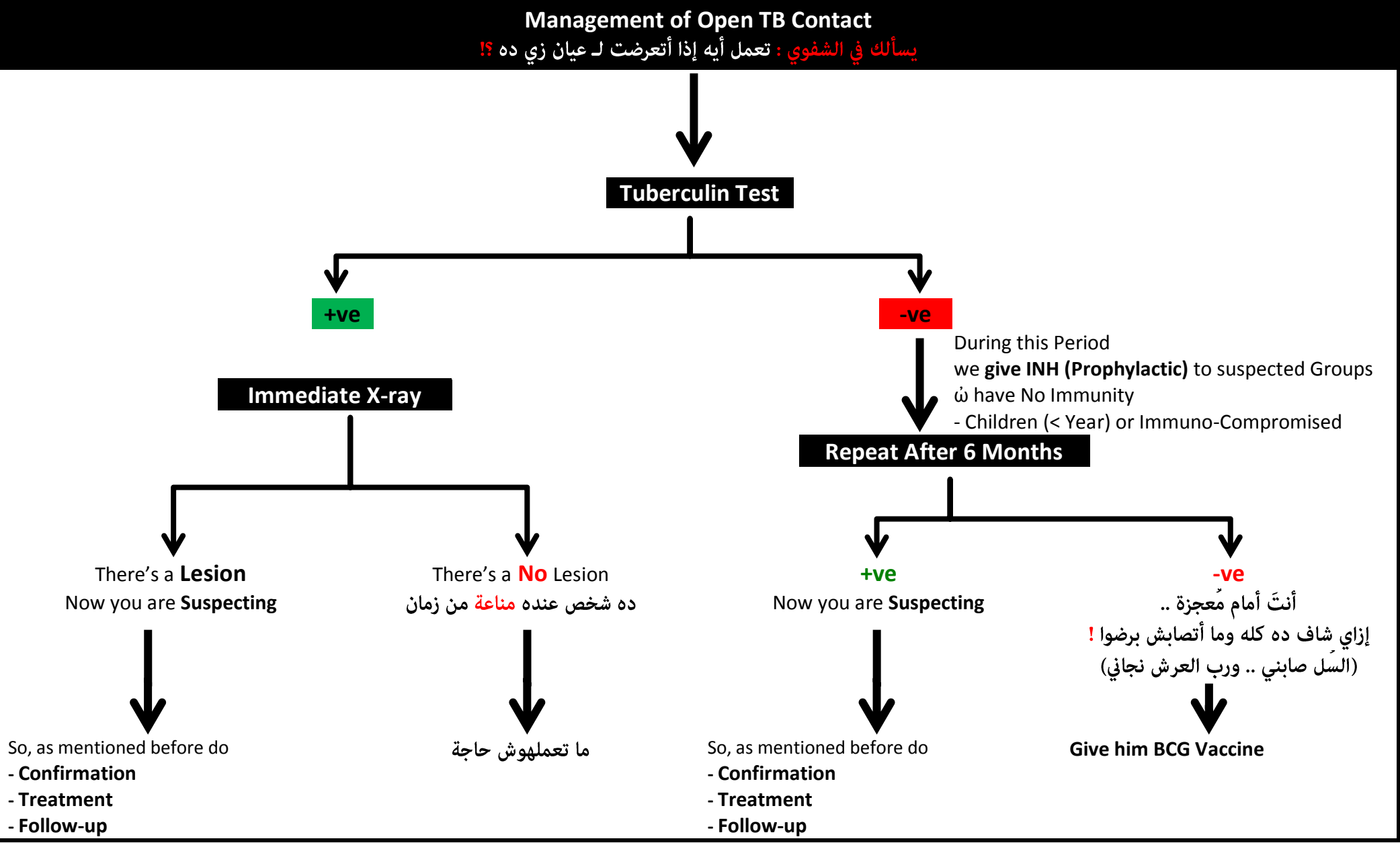
■ What's The Pulmonary Function ?!		مقياس التنفس Spirometer		for Accurate Diagnosis
1- <b>Ventilation</b> : the Air Enter the Lung		• the Results will be express as a Graph ( <b>Spiro-Graph</b> )		
Almost the Disease affect this Function				
→ ↓ ( <b>Hypo-Ventilation</b> ) .. either				
• <b>Obstructive</b> الدُّنْيَا مسدودة e.g. COPD		1 • <b>Forced Vital Capacity (FVC)</b> (FVC) (normally ≈ 5 Liters)		for Follow-up
• <b>Restrictive</b> مش قادر أفتح e.g. Fibrosis & Effusion		[Volume of Air Expired by Max. Expiration following Max. Inspiration] العيان ياخذ أقصى نفس عنده .. وبعدين يخرج أقصى نفسه عنده (ومش مهم المدة اللي هـ يخرج فيها النفس)		
2- Diffusion : the Air Enter the Alveoli		2 • <b>Forced Expiratory Volume in 1<sup>st</sup> Second (FEV<sub>1</sub>)</b> .. it Depends on Diameter of Airway (as Diameter ↑ → ↑ FEV <sub>1</sub> ) (FEV <sub>1</sub> ) (normally ≈ 4 Liters)		
3- Perfusion : the Air exchange with Blood		[Volume of Air that has been Exhaled at the End of the 1 <sup>st</sup> sec. of Forced Expiration] العيان ياخذ أقصى نفس عنده .. وبعدين يخرج أقصى نفسه عنده .. ونحسب الهوا اللي خرج في أول ثانية بس		
* <b>Indications</b> :		3 • <b>Forced Expiratory Ratio (FER) = FEV<sub>1</sub>/FVC ... *</b> in COPD, FER will ↓ (FER) (normally ≈ 4/5 = 80%)		Bed Side Tests
• <b>COPD</b> , <b>Fibrosis</b>		N.B. Spirometer is <u>Expensive</u> & <u>Need an Expert Doctor to Do it</u> , so we Do it <b>Once</b> for Accurate Diagnosis & Determination of the Treatment .. then change into ( <b>Follow up Tests</b> )		
* <b>Value</b> :				
• to Know the Nature of Lesion (Obstructive, Restrictive or Mixed)				
• to Know the Degree of Lesion via % of FER (Prognostic Value)				for Accurate Diagnosis
• to Determine the Reversibility of Lesion (e.g. in case of Broncho-Spasm .. do the test (FEV <sub>1</sub> ) .. then give the Patient Broncho-Dilator .. then Repeat the test (FEV <sub>1</sub> ) if it's Improved → it's Reversible Lesion)				
N.B. we have to Determine the Reversibility of Lesion as we will Treat the Patient with a Drug for Life which has also a Side Effect .. so we need to Know if this Drug is <b>Beneficial</b> or Not				
		Peak Expiratory Flow Rate (PEFR) أسم الإختبار		for Follow-up
		Peak Flow Meter أسم الجهاز		
		بـ يقيس معدل خروج الهواء في وحدة الزمن		for Follow-up
		لـ أنه الجهاز لما العيان ينفخ فيه المؤشر هـ يعلى لـ مستوى مُعين .. بس لما العيان يشيل بوقه من الجهاز .. المؤشر هـ يفضل مكانه في أعلى نقطة وصلها (إلا إذا العيان داس على زرار في الجهاز ورجعه لـ الصفر)		
.. it Depends on Diameter of Airway (as Diameter ↑ → ↑ PEFR) .. & as the +++ PEFR .. this mean that the Patient Condition is Improve				for Follow-up
* <b>Technique</b> :				
• 1 <sup>st</sup> patient should take a 3 repetitive Respirations .. then he Expired the Air				
★ N.B. <b>NOW .. the New Classification of Bronchial Asthma is Depend on (PEFR)</b>				
				for Follow-up
				
Match Test “very Famous but Not Accurate” الكبريت		Forced Expiratory Time (FET) “very Accurate”		Bed Side Tests
بـ تشوف العيان يقدر يطفي عود الكبريت من على بعد كام سم ..		بـ نخلي العيان يطلع نفس جامد		
* بس خلي بالك : العيان لازم يكون فاتح بوقه جامد ..		& the Doctor <b>put the Stethoscope on the Trachea</b>		
عشان ما يستخدمش عضلات بوقه في النفخ .. إحنا عايزين الهوا اللي خارج من الرئة بس		by Stopwatch : Determine the Time for <b>Expiration</b>		
* if Patient Can NOT Snuff Out the Match from a Distance < 15 Cm. .. this = <b>OBSTRUCTION</b>		(as the Time +++ > 5 Sec. .. this = <b>OBSTRUCTION</b> )		Bed Side Tests
		N.B. the Results of this Test is Comparable to the Results of Spirometer		
		الأفضل ليك أنك تعمل الإختبار ده ع الحالة من قبل ما يتطلب منك (منظرك قدام الدكتور وكدزه يعني)		

Categorize the Effusion				
Transudation		Exudation	Chylous	Malignant Effusion
< 3 gm %	Protein	> 3 gm %	• Milky White	• Hemorrhagic, Massive, Rapidly Re-Accumulating After Aspiration
< 1016	Sp. Gravity	> 1016	• Contains Many Fat	• Contains Malignant Cells
< 200 IU/L	LDH	> 200 IU/L	• Clear on Addition of Ether	• The Mediastinum may be Shifted to Same Side of Effusion due to Underlying Lung Collapse
< 1000 /ccm	Cells (WBCs)	> 1000 /ccm	• Stain Orange with Sudan III	



N.B. Nowadays, TB is <b>HOME Treatment Only</b> زمان كان في المُستشفيات		
Indication of Administration into Hospitals are :	1• Severe Pulmonary TB 2• Immuno-Compromised Patients 3• Resistant Cases	
طريقة إعطاء الدواء	• Non-Supervision Therapy (NST)	ب ندي العيان الدواء كل شهر .. وهو ياخده لوحده من غير ما حد يشرف عليه <b>عيبه</b> : أنه ممكن العيان ينسي ياخذ الدواء .. أو يبيع الدواء
	• Direct Observation Therapy (DOT)	في واحد ب يروح لـ العيان كل يوم يديله الدواء ويتأكد أنه أخذ الدواء <b>عيبه</b> : أنه لازم تُوفر موظف يعدي ع العيان كل يوم يديله الدواء
جُرعات الدواء	• Continuous Daily Dose	يومياً
	• Intermittent Weekly Dose	مرتين في الأسبوع (ب تجيب نفس النتائج + أسهل)
<b>* Multi-Drug Resistant TB (MDR-TB) :</b>		
• Definition :	[it's a TB ʔ Resistant to Both Rifampicin & INH]	
• Types :	• <b>1ry</b> : from the Start the Patient is Infected with a Resistant Strain	
	• <b>2ry</b> : Patient is Infected with Normal Strain .. but it Develop a Resistant with time	
• Risk Factors :	• <b>Faulty Treatment</b> e.g. the doctor start ttt with Only 1 Drug <u>or</u> Patient did not take the drugs • <b>Doctors &amp; Medical Students</b>	
• Diagnosis :	• ✓✓ via Culture & Sensitivity : ده الصح	
	• في مصر مش بـ نعمل كده .. مع الأسف بـ نبدأ العلاج ع طول .. وإذا العيان ما أستجابش ليه بعد شهور .. بـ نشخص <b>!</b>	
• Treatment :	- <b>24 Months Continuous</b> - <b>Pyrazinamide</b> + Quinolones " (ده اللي عليه خلاف في الأبحاث ) :	(N.B. absolutely we will not giving Rifampicin & INH)

N.B. nowadays .. there's a New term called **Extreme-Drug Resistant TB (XDR-TB)** [it's a TB ʔ Resistant to All Drugs]



N.B. in Practical : if the Patient said that he took (**5 Drugs !**) for treatment of TB the 5<sup>th</sup> Drug is most probably Vitamin as there's No TB Regimen with 5 Drugs **!**

Chest Scheme				
# How to Reach the Diagnosis ?!				
■ from H/O	<p>N.B. TB ال خود بالك من تشخيص ال [1. Chest Symptoms , 2. Toxic Symptoms &amp; 3. Treatment of the Patient]</p> <p>1- History of TB &amp; Now Patient Complaining from <b>Dyspnea → Pulmonary Fibrosis</b></p> <p>2- History of Pleural Effusion (عملوا لي بزل) &amp; Now Patient Complaining from <b>Dyspnea → Pleural Fibrosis</b> (take care! from the little Possibility for Effusion)</p> <p>3- Cough + Expectoration (و fulfill ¾ or more from 4Ps) → <b>S.L.S.</b> (+ Detect the Site of Lesion from H/O)</p> <p>4- Cough + Expectoration + Dyspnea + Wheezes (شكوى رباعية) → <b>C.O.P.D.</b> (take care! The is a little Possibility to be Associated with S.L.S.)</p> <p>5- عند نزول حالات الجراحة → <b>Chest Surgery Cases → 3</b> ناقش الإحتمالات ال (Follow-up, Complications or Recurrence)</p>			
■ from General Exam	<p>1- Clubbing : ● Hypoxic “with Cyanosis” → <b>Interstitial Pulmonary Fibrosis (I.P.F.)</b> خلاص الحالة أتشخصت 100% مفيش غيرها (ولكن عدم وجوده لا ينفي)</p> <p>● Toxic → <b>100% S.L.S</b></p> <p>2- Edema L.L. → <b>Cor-Pulmonale</b> (&amp; Revise the D.D. of Edema in Chest Patients)</p> <p>±3- if Patient Coughing → <b>Don’t Forget!</b> to Search for Complications of Cough (esp. Hernia &amp; Puffiness on Eyelid)</p> <p>±4- in C.O.P.D. Patients → <b>Don’t Forget!</b> to Search for Complications of Treatment :</p> <ul style="list-style-type: none"><li>● Broncho-Dilator : Tremors &amp; Pulse</li><li>● Cortisone : cushingoid</li></ul> <p>±5- <b>Don’t Forget!</b> to Search for Respiratory Failure Signs (esp. Cyanosis, <u>Flapping Tremors</u>, Disturbance of Conscious Level) ومش هتلاقيهم</p>			
■ from Local Exam	<b>1<sup>st</sup> Inspection for</b>			
	<p>1- Expansion عشان دول إذا جبتهم .. هـ يفيدوا جداً في التشخيص</p> <p>2- Symmetry</p>			
	<b>then Auscultation</b>			
	<table><tr><td>هـ أسمع فين</td><td>?</td><td><p>إذا عرفت الناحية المصابة .. أسمعها وأخلص</p><p>إذا ما عرفتهاش .. أسمع بـ الترتيب بقى منطقة منطقة</p></td></tr></table>	هـ أسمع فين	?	<p>إذا عرفت الناحية المصابة .. أسمعها وأخلص</p> <p>إذا ما عرفتهاش .. أسمع بـ الترتيب بقى منطقة منطقة</p>
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<b>then Repeat All Local Exam Again After you reached the Dx ..</b> بعد ما طلعت التشخيص .. أرجع أشتغل بقى ودور ع الي متوقع تلاقيه وأهتم بيه ..				